

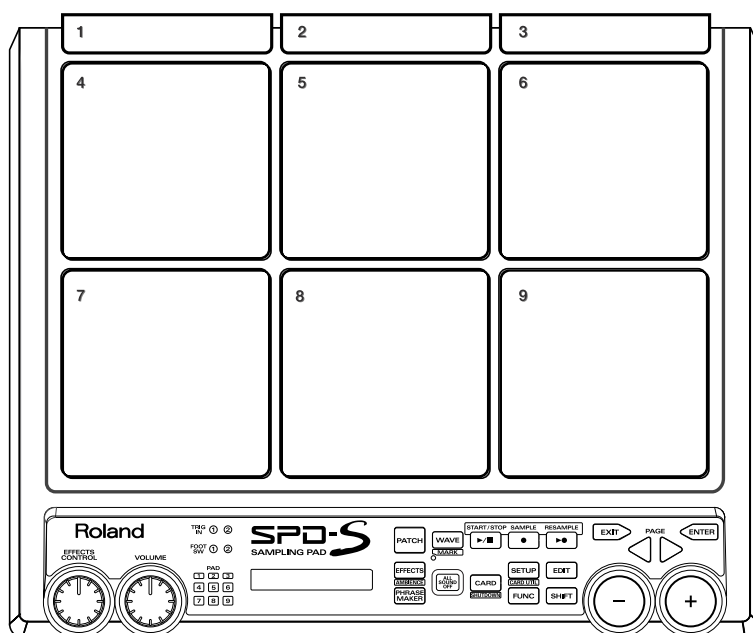
SPD-S



SAMPLING PAD

Owner's Manual

Thank you, and congratulations on your choice of the Roland Sampling Pad SPD-S.

Before using this unit, carefully read the sections entitled: "USING THE UNIT SAFELY" and "IMPORTANT NOTES" (p. 2–3; p. 4–5). These sections provide important information concerning the proper operation of the unit. Additionally, in order to feel assured that you have gained a good grasp of every feature provided by your new unit, Owner's manual should be read in its entirety. The manual should be saved and kept on hand as a convenient reference.



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USING THE UNIT SAFELY

INSTRUCTIONS FOR THE PREVENTION OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS

About ⚠ WARNING and ⚠ CAUTION Notices








⚠ WARNING	Used for instructions intended to alert the user to the risk of death or severe injury should the unit be used improperly.
⚠ CAUTION	Used for instructions intended to alert the user to the risk of injury or material damage should the unit be used improperly. * Material damage refers to damage or other adverse effects caused with respect to the home and all its furnishings, as well to domestic animals or pets.

About the Symbols






	The ⚠ symbol alerts the user to important instructions or warnings. The specific meaning of the symbol is determined by the design contained within the triangle. In the case of the symbol at left, it is used for general cautions, warnings, or alerts to danger.
	The 🔞 symbol alerts the user to items that must never be carried out (are forbidden). The specific thing that must not be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the unit must never be disassembled.
	The 🔌 symbol alerts the user to things that must be carried out. The specific thing that must be done is indicated by the design contained within the circle. In the case of the symbol at left, it means that the power-cord plug must be unplugged from the outlet.

ALWAYS OBSERVE THE FOLLOWING

⚠ WARNING

- Before using this unit, make sure to read the instructions below, and the Owner's Manual. 
- Do not open (or modify in any way) the unit or its AC adaptor. 
- Do not attempt to repair the unit, or replace parts within it (except when this manual provides specific instructions directing you to do so). Refer all servicing to your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the "Information" page. 
- Never use or store the unit in places that are:
 - Subject to temperature extremes (e.g., direct sunlight in an enclosed vehicle, near a heating duct, on top of heat-generating equipment); or are 
 - Damp (e.g., baths, washrooms, on wet floors); or are 
 - Humid; or are
 - Exposed to rain; or are
 - Dusty; or are
 - Subject to high levels of vibration.
- This unit should be installed on a stand using a clamp, such as an APC-33, which is recommended by Roland. 
- When installing the unit on a stand with a clamp such as an APC-33, the stand must not be placed in an unstable location or on an incline, but in a level and stable position. Even if a stand is not used, make sure that the unit is placed in a stable location. 

⚠ WARNING

- Be sure to use only the AC adaptor supplied with the unit. Also, make sure the line voltage at the installation matches the input voltage specified on the AC adaptor's body. Other AC adaptors may use a different polarity, or be designed for a different voltage, so their use could result in damage, malfunction, or electric shock. 
- Do not excessively twist or bend the power cord, nor place heavy objects on it. Doing so can damage the cord, producing severed elements and short circuits. Damaged cords are fire and shock hazards! 
- This unit, either alone or in combination with an amplifier and headphones or speakers, may be capable of producing sound levels that could cause permanent hearing loss. Do not operate for a long period of time at a high volume level, or at a level that is uncomfortable. If you experience any hearing loss or ringing in the ears, you should immediately stop using the unit, and consult an audiologist. 
- Do not allow any objects (e.g., flammable material, coins, pins); or liquids of any kind (water, soft drinks, etc.) to penetrate the unit. 


WARNING

- Immediately turn the power off, remove the AC adaptor from the outlet, and request servicing by your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the “Information” page when:



- The AC adaptor or the power-supply cord has been damaged; or
- If smoke or unusual odor occurs
- Objects have fallen into, or liquid has been spilled onto the unit; or
- The unit has been exposed to rain (or otherwise has become wet); or
- The unit does not appear to operate normally or exhibits a marked change in performance.

- In households with small children, an adult should provide supervision until the child is capable of following all the rules essential for the safe operation of the unit.



- Protect the unit from strong impact. (Do not drop it!)



- Do not force the unit’s power-supply cord to share an outlet with an unreasonable number of other devices. Be especially careful when using extension cords—the total power used by all devices you have connected to the extension cord’s outlet must never exceed the power rating (watts/amperes) for the extension cord. Excessive loads can cause the insulation on the cord to heat up and eventually melt through.



- Before using the unit in a foreign country, consult with your retailer, the nearest Roland Service Center, or an authorized Roland distributor, as listed on the “Information” page.



CAUTION

- The unit and the AC adaptor should be located so their location or position does not interfere with their proper ventilation.



- Always grasp only the output plug or the body of the AC adaptor when plugging into, or unplugging from, this unit or an outlet.



- Any accumulation of dust between the AC adaptor and the power outlet can result in poor insulation and lead to fire. Periodically wipe away such dust with a dry cloth. Also, disconnect the power plug from the power outlet whenever the unit is to remain unused for an extended period of time.



- Try to prevent cords and cables from becoming entangled. Also, all cords and cables should be placed so they are out of the reach of children.



- Never climb on top of, nor place heavy objects on the unit.



- Never handle the AC adaptor body, or its output plugs, with wet hands when plugging into, or unplugging from, an outlet or this unit.



- If you need to move the instrument, take note of the precautions listed below. Make sure to have a firm grip, to protect yourself from injury and the instrument from damage.



- Check to make sure that the clamp such as an APC-33 that fixes the unit to the stand has not become loose. Fasten them again securely whenever you notice any loosening.
- Disconnect the power cord.
- Disconnect all cords coming from external devices.

- Before cleaning the unit, turn off the power and unplug the AC adaptor from the outlet (p. 20).



- Whenever you suspect the possibility of lightning in your area, disconnect the AC adaptor from the outlet.



- Should you remove security screws, make sure to put them in a safe place out of children’s reach, so there is no chance of them being swallowed accidentally.



IMPORTANT NOTES

In addition to the items listed under “USING THE UNIT SAFELY” on page 2–3, please read and observe the following:

Power Supply

- Do not use this unit on the same power circuit with any device that will generate line noise (such as an electric motor or variable lighting system).
- The AC adaptor will begin to generate heat after long hours of consecutive use. This is normal, and is not a cause for concern.
- Before connecting this unit to other devices, turn off the power to all units. This will help prevent malfunctions and/or damage to speakers or other devices.

Placement

- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum. To alleviate the problem, change the orientation of this unit; or move it farther away from the source of interference.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.
- Noise may be produced if wireless communications devices, such as cell phones, are operated in the vicinity of this unit. Such noise could occur when receiving or initiating a call, or while conversing. Should you experience such problems, you should relocate such wireless devices so they are at a greater distance from this unit, or switch them off.
- Do not expose the unit to direct sunlight, place it near devices that radiate heat, leave it inside an enclosed vehicle, or otherwise subject it to temperature extremes. Excessive heat can deform or discolor the unit.
- When moved from one location to another where the temperature and/or humidity is very different, water droplets (condensation) may form inside the unit. Damage or malfunction may result if you attempt to use the unit in this condition. Therefore, before using the unit, you must allow it to stand for several hours, until the condensation has completely evaporated.

Maintenance

- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a cloth impregnated with a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzine, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Repairs and Data

- Please be aware that all data contained in the unit’s memory may be lost when the unit is sent for repairs. Important data should always be backed up on a CompactFlash card, or written down on paper (when possible). During repairs, due care is taken to avoid the loss of data. However, in certain cases (such as when circuitry related to memory itself is out of order), we regret that it may not be possible to restore the data, and Roland assumes no liability concerning such loss of data.

Additional Precautions

- Please be aware that the contents of memory can be irretrievably lost as a result of a malfunction, or the improper operation of the unit. To protect yourself against the risk of losing important data, we recommend that you periodically save a backup copy of important data you have stored in the unit’s memory on a CompactFlash card.
- Unfortunately, it may be impossible to restore the contents of data that was stored in the unit’s memory, a CompactFlash card, or another MIDI device (e.g., a sequencer) once it has been lost. Roland Corporation assumes no liability concerning such loss of data.
- Use a reasonable amount of care when using the unit’s buttons, sliders, or other controls; and when using its jacks and connectors. Rough handling can lead to malfunctions.
- Never strike or apply strong pressure to the display.
- When connecting / disconnecting all cables, grasp the connector itself—never pull on the cable. This way you will avoid causing shorts, or damage to the cable’s internal elements.

- To avoid disturbing your neighbors, try to keep the unit's volume at reasonable levels. You may prefer to use headphones, so you do not need to be concerned about those around you (especially when it is late at night).
- This instrument is designed to minimize the extraneous sounds produced when it's played. However, since sound vibrations can be transmitted through floors and walls to a greater degree than expected, take care not to allow these sounds to become a nuisance to neighbors, especially when performing at night and when using headphones.
- When you need to transport the unit, package it in the box (including padding) that it came in, if possible. Otherwise, you will need to use equivalent packaging materials.
- Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.
- Use a cable from Roland to make the connection. If using some other make of connection cable, please note the following precautions.
 - Some connection cables contain resistors. Do not use cables that incorporate resistors for connecting to this unit. The use of such cables can cause the sound level to be extremely low, or impossible to hear. For information on cable specifications, contact the manufacturer of the cable.
- CompactFlash cards are constructed using precision components; handle the cards carefully, paying particular note to the following.
 - To prevent damage to the cards from static electricity, be sure to discharge any static electricity from your own body before handling the cards.
 - Do not touch or allow metal to come into contact with the contact portion of the cards.
 - Do not bend, drop, or subject cards to strong shock or vibration.
 - Do not keep cards in direct sunlight, in closed vehicles, or other such locations (storage temperature: -25°C–85°C).
 - Do not allow cards to become wet.
 - Do not disassemble or modify the cards.

Handling CD-ROMs

- Avoid touching or scratching the shiny underside (encoded surface) of the disc. Damaged or dirty CD-ROM discs may not be read properly. Keep your discs clean using a commercially available CD cleaner.

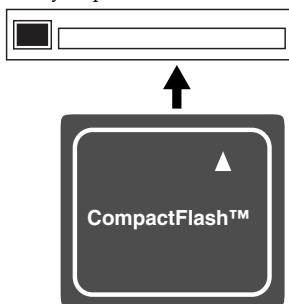
Copyright

- Unauthorized recording, distribution, sale, lending, public performance, broadcasting, or the like, in whole or in part, of a work (musical composition, video, broadcast, public performance, or the like) whose copyright is held by a third party is prohibited by law.
- Do not use this unit for purposes that could infringe on a copyright held by a third party. We assume no responsibility whatsoever with regard to any infringements of third-party copyrights arising through your use of this unit.

Before Using Cards

Using DATA Cards

- Carefully insert the DATA card all the way in—until it is firmly in place.



- Never touch the terminals of the DATA card. Also, avoid getting the terminals dirty.
- The SPD-S's memory card slot accepts CompactFlash memory cards. Microdrive storage media by IBM are not compatible.

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Main Features

A Sampler with Pads Perfect for Drummers and Percussionists

Nine pads housed in a compact body (p. 15)

The SPD-S offers nine playing surfaces: six pads with excellent responsiveness and feel, and three edge triggers that are easy to hit with the shoulder of a stick—all within a compact body that can easily be installed as part of a drum or percussion set.

Easy operation for sampling (p. 25, p. 52)

As a simple sampler freeing you from complicated operation, the SPD-S allows you to readily sample percussion sounds and phrases to use them in your performance.

Preset sounds that can be used as soon as you unpack the unit (p. 133, p. 134)

The SPD-S comes with preset sounds including percussion sounds, drum sounds, sound effects, and phrase loops.

A wide array of sampling modes (p. 52, p. 58)

The SPD-S supports three sampling modes suited to different sound qualities and phrase lengths: FINE for CD quality sampling, STANDARD, and LONG. With a sampling frequency of 44.1 kHz, it also supports stereo sampling. An approximate maximum of twelve minutes of sound can be stored in the internal memory (in mono in the LONG mode).

Handy Phrase Maker function (p. 63)

The SPD-S has a Phrase Maker function that records a performance made with pads and resamples it to convert it to a wave. It enables you to create an original phrase.

Producing Highly Expressive Sounds

Two different sounds from a single playing surface (p. 30, p. 34)

On the SPD-S, you can assign two waves to a single playing surface. The two waves can be switched using strike intensity or with foot switches.

Thirty effect algorithms (p. 92) plus ambience effects (p. 76)

The SPD-S includes 30 effect algorithms that process sampled sounds and ambience effects that produce natural sounds. In addition, the effect parameters can be controlled in real time with the control knob or separately sold expression pedals.

Readily Expandable

Support for CompactFlash (p. 67)

Using CompactFlash, the recordable time dramatically increases. The number of recordable sounds also increases to 500. The SPD-S supports import and export of WAV/AIFF files through CompactFlash cards.

Connections with external pads, foot switches, etc. (p. 16, p. 20, p. 79, p. 80)

The SPD-S is equipped with connectors for external pads and other accessories. These allow you to connect conventional pads, cymbals, kick triggers, acoustic drum triggers, etc. (two can be connected at once; requires use of optional PCS-31).

The SPD-S also comes with foot switch jacks. Foot switches can be assigned a broad variety of functions. For instance, they can be used to switch patches, enable/disable the effects, or toggle between two waves.

Terms Used in This Manual

- Button names are enclosed in square brackets “[],” as in [PATCH].
- (p. **) indicates a reference page.
- Symbols and their meanings are as follows.



These indicate cautionary notes. Be sure to read them.



These are memos containing information regarding settings and functions. Read it as necessary.



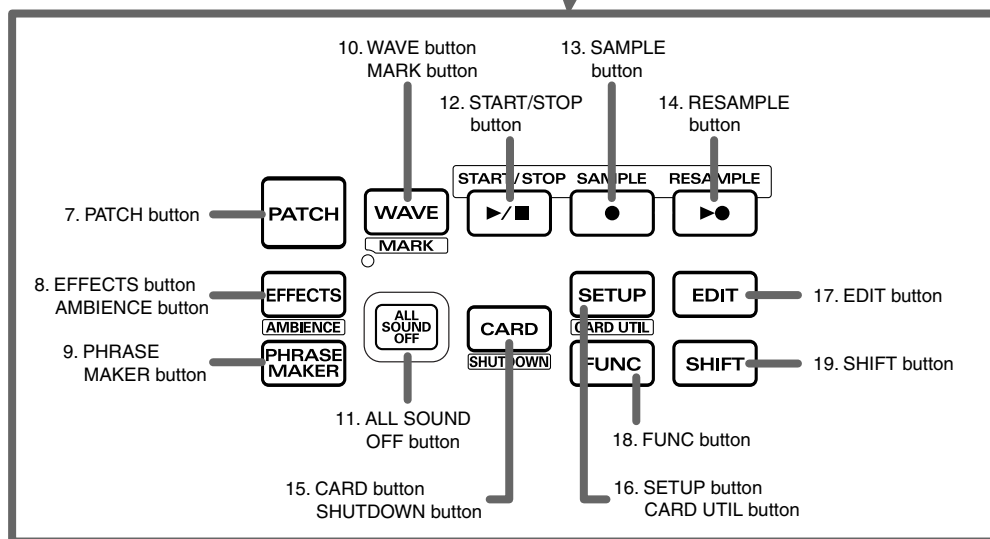
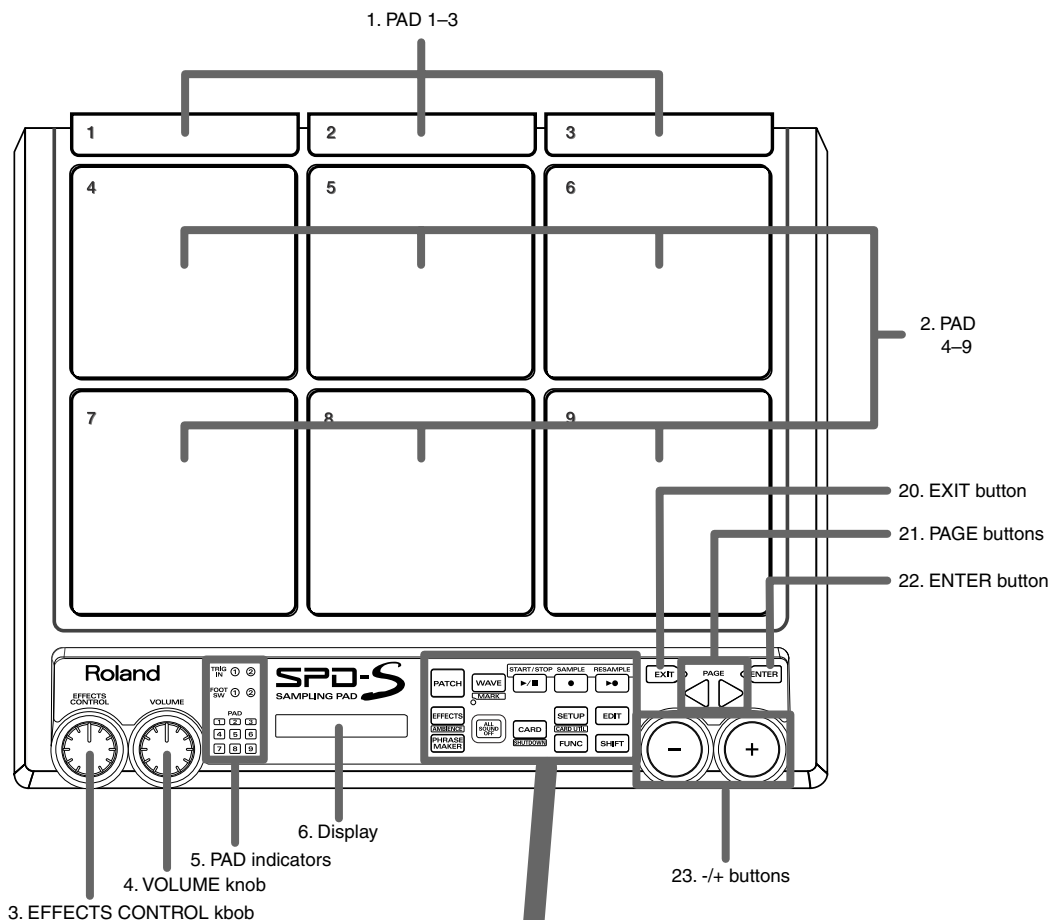
These are useful hints for operation. Read it as necessary.



These point to reference information. Read it as necessary.

Setup Guide

Panel Descriptions



Top Panel

1. PAD 1 to 3

To play these pads, strike them using the shoulder of the stick.

2. PAD 4 to 9

Strike these pads with a stick to play them.

3. EFFECTS CONTROL knob

Controls the effects in real time. (p. 92)

4. VOLUME knob

Controls the output volume from the OUTPUT jacks. The headphones volume can be controlled with the PHONES LEVEL knob (37).

5. Pad indicators

Are lit when the sounds of their corresponding playing surfaces are produced. When lit or flashing, they indicate that the corresponding playing surfaces are selected during editing.

Indicator	Playing surfaces
TRIG IN	Playing surfaces connected to the TRIG IN (1/2) jack (30)
FOOT SW	Playing surfaces connected to the FOOT SW (1/2) jack (29)
PAD	Pads on the SPD-S

6. Screen

Indicates patch names, wave names, parameter values, etc.

7. PATCH button

Press this button so it is lit to enter patch mode (p. 24, p. 30).

8. EFFECTS button/AMBIENCE button

Press this button so it is lit to apply effects (p. 92).
Hold down [SHIFT] and press it to enable/disable the ambience effects (p. 76).

9. PHRASE MAKER button

To use the Phrase Maker function (p. 63), press this button for a moment so it is lit.

10. WAVE button/MARK button

Press this button so it is lit to enter wave mode (p. 41).
Hold down [SHIFT] and press it to use the marking function (p. 48).

11. ALL SOUND OFF button

Stop all the sounds being produced.

12. START/STOP button

Starts or stops sampling, resampling, or recording with the Phrase Maker function. In wave mode, press this button to reproduce the sound of the selected wave.

13. SAMPLE button

To carry out sampling (p. 52), press this button so it is lit.

14. RESAMPLE button

To carry out resampling (p. 59), press this button so it is lit.

15. CARD button/SHUTDOWN button

Press this button so it is lit to use a memory card.
Hold down [SHIFT] and press it for a moment to shut the unit down (p. 22, p. 23).

16. SETUP button/CARD UTIL button

Press this button so it is lit to access the Setup Edit/Utilities (p. 74).
Hold down [SHIFT] and press it to access the Card Utilities (p. 67).

17. EDIT button

Press this button so it is lit to access the Patch Edit/Utilities (p. 32, p. 33) or Wave Edit/Utilities (p. 43, p. 44).

18. FUNC button

For example, while this button is depressed, the remaining memory capacity (time) is indicated. Depending on each status, it produces different functions.

19. SHIFT button

Used in combination with other buttons (p. 90).

20. EXIT button

Returns to the screen at the previous layer.

21. PAGE buttons

Change the displayed item/parameter. Also used for moving the cursor in a screen where you need to supply a name.

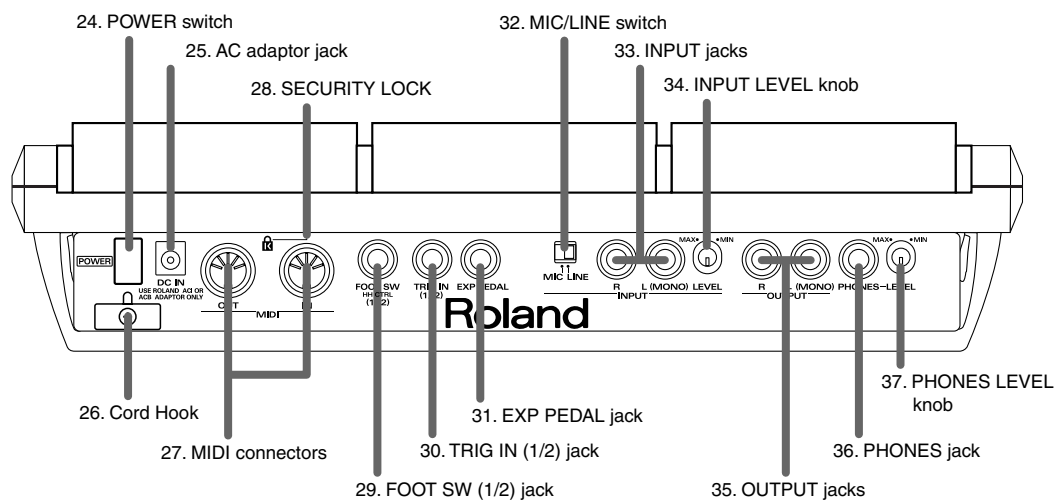
22. ENTER button

Press this button when it is flashing to execute an operation.

23. +/- buttons

Change the patch number, wave number, or parameter value.

Rear Panel



24. POWER switch

Turns the unit on or off (p. 22).

25. AC adaptor jack

Accepts connection of the supplied AC adaptor (p. 20).

26. Cord hook

Anchors the AC adaptor cord (p. 20).

27. MIDI connectors (OUT, IN)

Connect MIDI devices.

28. Security Slot (K)

<http://www.kensington.com/>

29. FOOT SW (1/2) jack

Connect a foot switch (DP-2 or BOSS FS-5U sold separately) or a hi-hat control pedal (FD-7 sold separately). The foot switch and the control pedal can be used for producing a sound or for changing a patch. To connect two foot switches (FS-5U sold separately), use a dedicated cable (PCS-31 sold separately).

30. TRIG IN (1/2) jack

Connect a separately sold pad, cymbal, kick trigger, or acoustic drum trigger to the SPD-S (p. 80).

31. EXP PEDAL jack

Connect an expression pedal to control the effects.



Use only the specified expression pedal (EV-5; sold separately). By connecting any other expression pedals, you risk causing malfunction and/or damage to the unit.

32. MIC/LINE switch

Set this switch to MIC to connect a microphone to the INPUT jacks. (p. 25, p. 53)

33. INPUT jacks

Connect an audio device or a microphone for sampling (p. 20, p. 25, p. 53). To input a sound in mono, connect to the L (MONO) jack.

34. INPUT LEVEL knob

Controls the input level of the signal from the device connected to the INPUT jacks (p. 25, p. 26, p. 53, p. 54, p. 56).

35. OUTPUT jacks

Outputs sound signals. To output in mono, connect to the L (MONO) jack (p. 20).

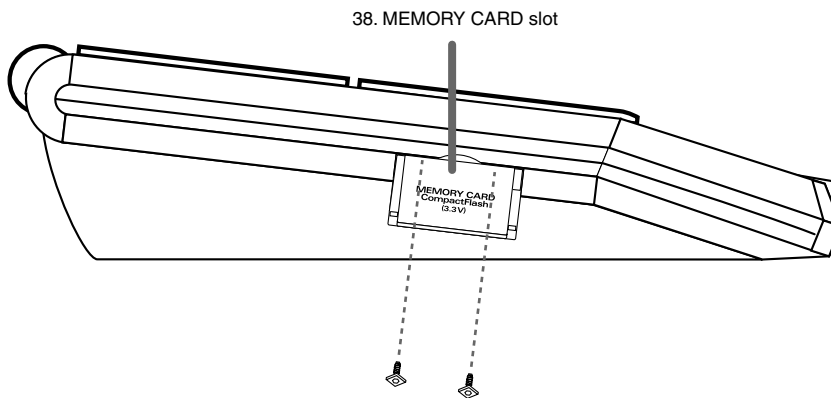
36. PHONES jack

Accepts connection of stereo headphones (p. 20). Sound signals are output from the OUTPUT jacks even when headphones are connected.

37. PHONES LEVEL knob

Controls the headphones volume. This knob is independent of the VOLUME knob (4).

Side Panel



38. MEMORY CARD slot

Accepts a CompactFlash memory card (p. 67).



Using the supplied hexagon wrench, you can attach the two security screws (supplied) in front of door to the memory card slot. Once the screws have been secured in place, the door to the memory card slot cannot be opened, thus preventing theft of the card.

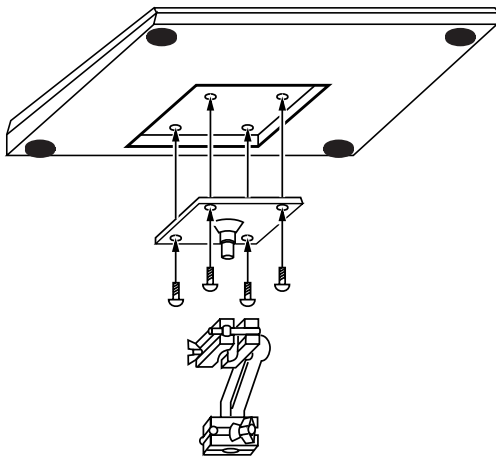
Mounting on a Stand

To mount the SPD-S on a cymbal stand or other type of stand, use a separately sold APC-33 all-purpose clamp set to attach the stand holder. It can be attached to a pipe with a diameter of 10.5 to 30 mm.

Using a 4 mm wrench included with the all-purpose clamp (APC-33), remove the four screws from the SPD-S's bottom panel. Use these removed screws to attach the stand holder of the APC-33 to the bottom panel of the SPD-S.

NOTE

Do not use the screws included with the APC-33.



NOTE

When turning the unit upside-down, get a bunch of newspapers or magazines, and place them under the four corners or at both ends to prevent damage to the buttons and controls. Also, you should try to orient the unit so no buttons or controls get damaged.

NOTE

When turning the unit upside-down, handle with care to avoid dropping it, or allowing it to fall or tip over.

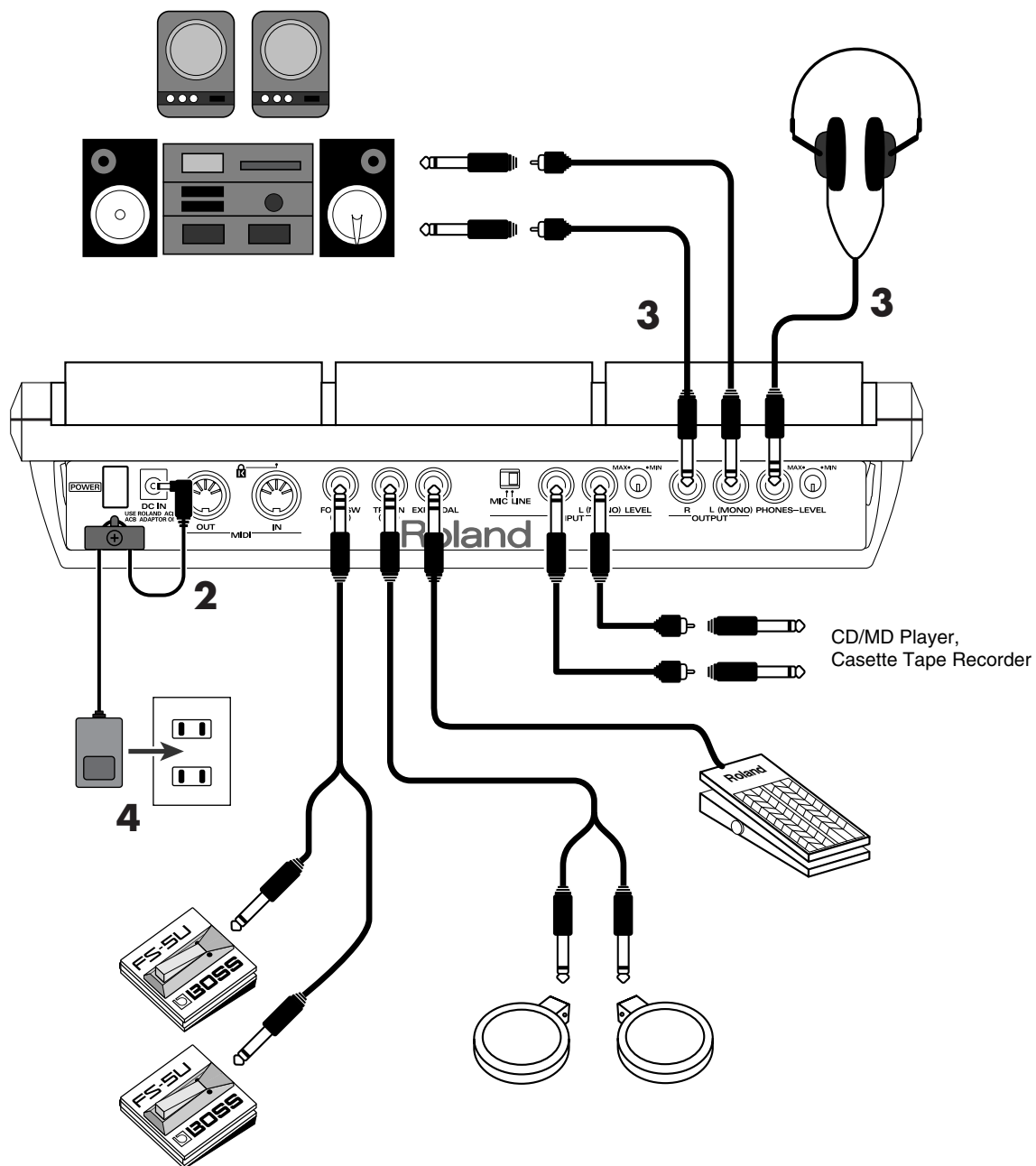
NOTE

Make sure that the stand is installed in an appropriate place to ensure stability.

NOTE

Do not mount the SPD-S on any stand that is insufficiently robust.

Connecting External Devices



While referring to the illustration on the previous page, take the following steps:

1. Before making a connection, power all the devices off.



To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

2. Connect the supplied AC adaptor to the AC Adaptor jack.



To prevent the inadvertent disruption of power to your unit (should the plug be pulled out accidentally), and to avoid applying undue stress to the AC adaptor jack, anchor the power cord using the cord hook, as shown on the previous page.

3. Connect an audio system or an amplifier to the OUTPUT jacks. To use headphones, connect them to the PHONES jack.

To sample (p. 25, p. 52), connect an input device (like a CD player or a microphone) to the INPUT jacks.

4. Insert the plug of the AC adaptor into a power outlet.



Q: The volume level of the instrument connected to INPUT jacks is too low.

A: Could you be using a connection cable that contains a resistor?

Use a connection cable that does not contain a resistor.



Howling could be produced depending on the location of microphones relative to speakers. This can be remedied by:

1. Changing the orientation of the microphone(s).
2. Relocating microphone(s) at a greater distance from speakers.
3. Lowering volume levels.

Turning On/Off the Power

Turning On the Power

NOTE

Once the connections have been completed (p. 20), turn on power to your various devices in the order specified. By turning on devices in the wrong order, you risk causing malfunction and/or damage to speakers and other devices.

1. Turn the **VOLUME** knob completely to the left to lower the volume to the minimum level.
2. Turn down the volume control on the connected amp or audio system.
3. Press the **POWER** button to turn on the power to the SPD-S.

NOTE

This unit is equipped with a protection circuit. A brief interval (a few seconds) after power up is required before the unit will operate normally.

NOTE

If you hit a pad when powering the unit on, the SPD-S produces poor responses to weak strikes.

4. Turn on the power to the connected amp or audio system.
5. Strike pads, and while listening to the sound, gradually bring up the **VOLUME** knob to adjust the volume level.

Also raise the volume level of the connected amp or audio system to the appropriate level.

Turning Off the Power after the Shutdown Operation

NOTE

Before turning off the power to the SPD-S, make sure to shut the unit down. Turning off the power before the shutdown operation is finished may corrupt the data in the internal memory or the memory card.

1. Select patch mode or wave mode.

MEMO

Press [PATCH] to select patch mode, or press [WAVE] to select wave mode.

2. Hold down [SHIFT] and press [CARD] for about two seconds to start the shutdown operation.

While the shutdown operation is in progress, a “shutdown..” indication is displayed. A “shutdown.. OK!” indication appears when the shutdown operation is complete. Then you can turn off the power safely.

MEMO

After a “shutdown.. OK!” indication appears, press [PATCH] to return to patch mode, or press [WAVE] to return to wave mode.

3. Turn down the volume level of the SPD-S and the external devices connected to the SPD-S.
4. Turn off the power to the external devices.
5. Press the **POWER** button to turn off the power to the SPD-S.

Inserting/Removing a Memory Card (CompactFlash)

Inserting a Memory Card

1. Open the card slot cover on the left side of the SPD-S, and insert a memory card.

MEMO

A memory card can be inserted when either SPD-S's power is on or off.

NOTE

Carefully insert the CompactFlash all the way in-until it is firmly in place.

Removing a Memory Card after the Shutdown Operation

NOTE

While the SPD-S's power is on, make sure to take the shutdown operation before removing a memory card (CompactFlash). Removing it before the shutdown operation is finished may corrupt the data in the internal memory or the memory card.

1. Select patch mode or wave mode.

MEMO

Press [PATCH] to select patch mode, or press [WAVE] to select wave mode.

2. Hold down [SHIFT] and press [CARD] for about two seconds to start the shutdown operation.

While the shutdown operation is in progress, a "shutdown.." indication is displayed. A "shutdown.. OK!" indication appears when the shutdown operation is complete. Then you can remove the memory card safely.

MEMO

After a "shutdown.. OK!" indication appears, press [PATCH] to return to patch mode, or press [WAVE] to return to wave mode.

NOTE

After finishing the shutdown operation, SPD-S cannot detect a memory card in the card slot. If you pull out the card from the card slot and insert it again, then it is detected.

3. Open the card slot cover and push an eject button beside the card slot. Then, pull out the card with your fingers.

After removing the memory card, SPD-S returns to patch mode or wave mode.

Quick Start

Making a Performance

Take the following steps:

1

Follow the steps explained on p. 20 to connect external devices to the SPD-S.

2

Follow the steps in “Turning On the Power” (p. 22) to power the SPD-S on.

3

Press [PATCH] so it is lit. The SPD-S enters patch mode.



4

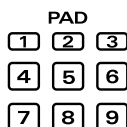
To select a patch, press [-]/[+] to change the patch number.



5

Hit the nine pads on the SPD-S with your sticks to play something.

The pad indicators of pads you hit will light.



Hit pads 1 to 3 using the shoulder portion of the sticks.



To enable the effects, press [EFFECTS] so it is lit. To disable the effects, press [EFFECTS] so it is unlit.



To control the effects, turn the EFFECTS CONTROL knob to the left or right. Turning the knob to the right increases the difference. This operation is active while [EFFECTS] is lit.



If you hold down [SHIFT] and press [-]/[+], you can change the patch number in steps of 10. If you hold down [+] and press [-], or hold down [-] and press [+], the patch number changes quickly.



If you hold down [SHIFT] and press [EXIT], the changes you've made with the knob are cancelled.

MEMO

If you press [ALL SOUND OFF], all sounds being produced are stopped.

**6**

After your performance, follow the steps in “Turning Off the Power after the Shutdown Operation” (p. 22) to power the SPD-S off.

Sampling

The SPD-S allows you to load (sample) your favorite sounds, then play them. The following guides you through the process of connecting a CD player, sampling a sound from the accompanying CD, and playing it back.

NOTE

Unauthorized recording (sampling) of any audio work made by any third parties is prohibited by law, unless it is limited to special circumstances, such as private, personal enjoyment. Do not record illegally.

NOTE

Roland Corporation assumes no responsibility or liability for legal penalties or claims made by copyright holders as a result of any illegal recordings made using any Roland product.

■ Before Sampling

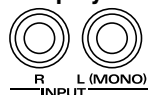
Take the following steps before sampling:

1

Turn the **INPUT LEVEL** knob on the rear panel to **MIN**.

**2**

Connect a CD player to the **INPUT** jacks on the rear panel.

**3**

Set the **MIC/LINE** switch on the rear panel to **LINE**.

**4**

Power up the CD player.

5

Follow the steps in “Turning On the Power” (p. 22) to power the SPD-S on.

NOTE

To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

■ Sampling

1

Press [PATCH] so you are in patch mode.



2

Press [-]/[+] to select the patch that name is “New Patch.”

3

Press [SAMPLE].



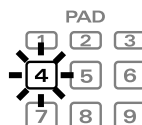
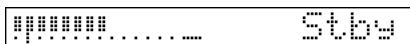
4

The screen displays “select dest pad.” Try to sample a sound onto PAD 4 in this tutorial. So, hit the playing surface of the PAD 4. If you need to select a pad again, press [EXIT] to return to patch mode.



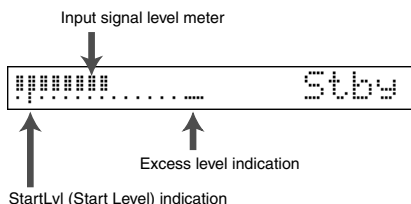
5

A “Stby” (Standby) message is displayed and the indicator of PAD 4 lights. Play back the connected CD player and control the input level.



MEMO

The sound input from INPUT jacks can be heard through the SPD-S.



Turn the INPUT LEVEL knob on the rear panel with your eye on the level meter to maximize the input level within the range in which the excess level indication remains unlit.

HINT

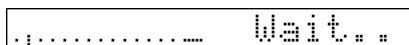
If you hold down [SHIFT] and press [-]/[+], you can change the patch number in steps of 10. If you hold down [+] and press [-], or hold down [-] and press [+], the patch number changes quickly.

HINT

While [FUNC] is being depressed in Steps 5–6, the remaining time for sampling (“Remain”) is displayed. (p. 58)

6

Press [START/STOP] to start sampling.



A “Wait..” message appears and the SPD-S enters the standby state. Start playback of the CD player, then sampling begins automatically. A “Rec” message is displayed while sampling is in progress.

7

Press [START/STOP] to finish sampling.



8

A “write?” message is displayed. Assign a name to the wave. Press the PAGE buttons to move the cursor under the name and press [-]/[+] to change the character at the cursor position. When the name is complete, press [ENTER] to save it.

A “now writing..” message appears; it shows that a wave is being saved.



If you do not want to save the wave, press [EXIT], and you will return to the ‘Stby’ (Standby) screen in Step 5.

9

After saving the wave, you will return to patch mode. If you hit the playing surface of PAD 4, you can check the sampled sound.

10

Turn off the power to the SPD-S according to the steps of “Turning Off the Power after the Shutdown Operation” (p. 22).



Do not power the SPD-S off while sampling is in progress.



If you press [START/STOP] or hit a relevant playing surface, you can check the sampled sound.

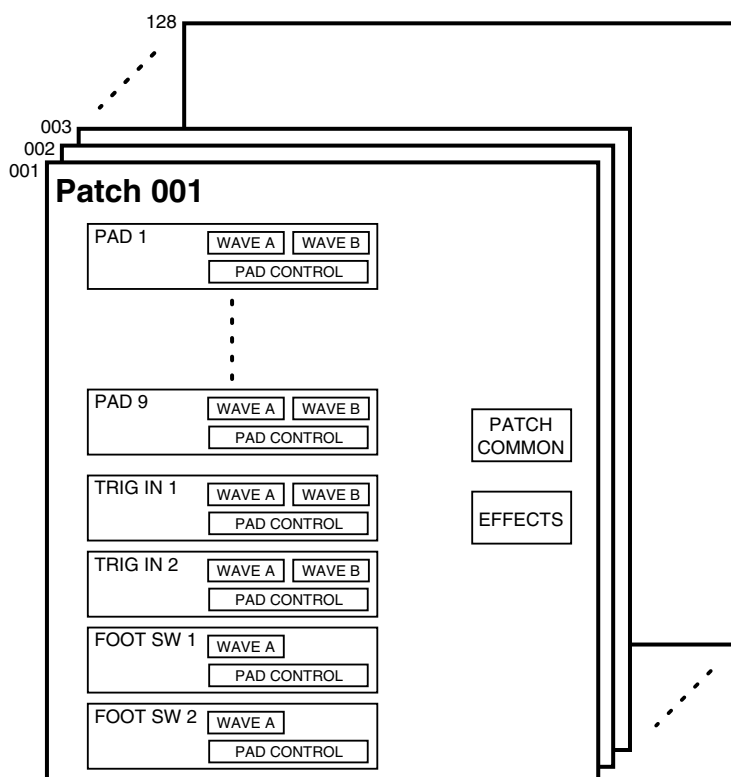


Do not power the SPD-S off while saving a wave.

Advanced Use

Chapter 1 Making a Performance/ Creating a Patch

The patch mode is for giving a performance. A patch is a combination of sounds assigned to different playing surfaces and effect settings. The internal memory can store 128 patches. No patch can be stored on any memory card.



Patch Mode

To enter patch mode, press [PATCH] so it is lit.

Selecting a patch

Press [-]/[+] to change the patch number.



If you hold down [SHIFT] and press [-]/[+], you can change the patch number in steps of 10. If you hold down [+] and press [-], or hold down [-] and press [+], the patch number changes quickly.

Making sure of the memory card (CompactFlash)

When the selected patch uses a wave stored on a card, [CARD] flashes without the CompactFlash card inserted in the card slot of the SPD-S. In this case, the wave sound is not reproduced.



If you press [CARD] while it is flashing, its light goes out temporarily.

Locking the buttons

You can lock (disable) the buttons so that a performance cannot be interrupted if a button like [SAMPLE] is pressed by mistake while the performance is in progress. Keep pressing [FUNC] for a while to lock the buttons; “**lock**” will be displayed in the screen. Keep pressing [FUNC] for a while again to unlock the buttons; “**unlock**” will be displayed.



If you press a locked button, a “lock!” indication appears.

Enabling/disabling ambience

To turn ambience **ON**, hold down [SHIFT] and press [EFFECTS], so that “**Ambience ON**” appears in the display.

To turn ambience **OFF**, hold down [SHIFT] and press [EFFECTS], so that “**Ambience OFF**” appears in the display.



Ambience cannot be individually enabled or disabled for different patches.



For details on ambience, see p. 76.

Enabling/disabling effects

To **enable** effects, press [EFFECTS] so it is lit.

To **disable** effects, press [EFFECTS] so it is not lighted.



For details on effects, see p. 92.

Controlling effects

While hitting playing surfaces for a performance, turn the EFFECTS CONTROL knob, depress the expression pedal or control the strength of your strikes to make change to effects.



If you hold down [SHIFT] and press [EXIT], changes made to patch effects are cancelled.



Controlling effects are valid when [EFFECTS] is lit.

Stopping all sounds produced (ALL SOUND OFF)

Press [ALL SOUND OFF] to stop all sounds being produced.

For example, if Trigger (in WAVE SETUP in Wave Edit -> p. 46) is set to SHOT for a long wave, sound reproduction is unstoppable midstream. In this case, you can stop the sound by pressing [ALL SOUND OFF].

■ Notes on Giving a Performance

Number of waves that can be reproduced simultaneously

The SPD-S can reproduce a maximum of eight voices simultaneously. A wave for which Mode (in Sampling -> p. 58) is set to STEREO or Grade (in Sampling -> p. 58) is set to FINE has two voices. A wave in STEREO and in FINE grade has four voices.

If you try to reproduce more than eight voices, the wave of the pad that was hit earlier is stopped to give preference to reproducing the wave of the pad that was struck later. In this case, reproduction of a wave for which Type (p. 45) is set to SINGLE is discontinued earlier than a PHRASE-type wave.

Basic Operations for Patch Edit

This section describes the steps for setting a patch. Patch settings are made using Patch Edit.

1

Press [PATCH] so you are in patch mode.

2

Press [-]/[+] to select a patch.

3

Press [EDIT] to go into Patch Edit.

[EDIT] lights at this time.

4

Press the PAGE buttons to select an item to be edited from those listed below, and then press [ENTER].

To select another item after pressing [ENTER], press [EXIT].

For details on each item, see its reference page.

- **WAVE A** -> p. 34
- **WAVE B** -> p. 34
- **PAD CONTROL** -> p. 36
- **EFFECTS** -> p. 37
- **PATCH COMMON** -> p. 37

Listed below are patch utilities. See p. 33.

- PAD COPY
- PAD EXCHANGE
- PAD INIT (Pad Initialize)
- PATCH COPY
- PATCH EXCHANGE
- PATCH INIT (Patch Initialize)

5

Press the PAGE buttons to change the parameter for the item.

To change the individual settings for different playing surfaces, hit a playing surface (such as a pad on the SPD-S, an external pad, or a foot switch) for which the settings are to be changed to select it. A flashing pad indicator indicates that the corresponding playing surface is selected.

6

While hitting the playing surface for monitoring the sound, press [-]/[+] to change the parameter value.

7

Press [EXIT] and then repeat Steps 4 to 6 to continue Patch Edit operations. Press [PATCH] to finish Patch Edit.

The SPD-S saves the settings (with “now writing..” indicated) and then returns to the patch mode.



If you hold down [SHIFT] and press [-]/[+], you can change the patch number in steps of 10. If you hold down [+] and press [-], or hold down [-] and press [+], the patch number changes quickly.



If there are any selectable items, PAGE buttons ([<], [>] or both) are lit.



When it is necessary to press [ENTER], it is flashing.



While editing you can also choose among pads/sounds by pressing a PAGE button while holding down [SHIFT].



If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.

Patch Utilities

When changing any item on the following patch utilities, see their respective reference pages.

* *You can select the items listed below in Step 4 (p. 32) in “Basic Operations for Patch Edit.” However, they are different in character from Patch Edit. To take the subsequent steps for these items, follow the steps described on their respective reference pages.*

- **PAD COPY** -> p. 38
- **PAD EXCHANGE** -> p. 38
- **PAD INIT** (Pad Initialize) -> p. 39
- **PATCH COPY** -> p. 39
- **PATCH EXCHANGE** -> p. 39
- **PATCH INIT** (Patch Initialize) -> p. 40

MEMO

Steps 1 to 4 in “Basic Operations for Patch Edit” are identical to the steps for operation of patch utilities.

Patch Edit Parameters

These parameters allow you to select the sounds that will be triggered by pads on or connected to the SPD-S (or foot switch).

WAVE A

Select a wave to be assigned to a pad (Press EDIT). Two waves, A and B, can be assigned to any pad. Only Wave A can be assigned to the foot switch. This is for configuring wave A.

Hit the pad or press the PAGE buttons while holding down [SHIFT] to choose what you are editing. Pad indicators light up to indicate what pad/trigger you are working on.

Setting up: Press PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
A (Wave)	I 000 (OFF), I 001–399, C 001–500	Specify the wave number (sound) assigned to the wave A position. I 000 (OFF): Selected when you want no sound to be produced I 001–399: Internal memory C 001–500: Memory card * By pressing [CARD], you can select the top number of the internal memory or of the memory card.
A Level	0–127	Set the volume of wave A.
A Pan	L15–CENTER–R15, RANDOM	Set the pan position (left-right balance) of wave A. If set to RANDOM, the pan position varies each time the sound is reproduced.



If you change the value in Level or Pan during sound production, the sound is stopped.



If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.

If you hold down [SHIFT] and press [ENTER], the parameter is copied to all other pads/triggers.

WAVE B

Select a wave to be assigned to a pad (Press EDIT). This is for configuring wave B.

Hit the pad or press the PAGE buttons while holding down [SHIFT] to choose what you are editing. Pad indicators light up to indicate what pad/trigger you are working on.



Wave B can NOT be assigned to any foot switch.

Setting up: Press PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Wave SW (Wave Switch)	OFF, VELO, FOOTSW	Determines HOW waves A and B will sound. OFF: Wave B is not triggered. VELO: The sound to be reproduced, either wave A or B, is determined by the velocity (strike force). The threshold level is specified with VeloSWPoint, below. FOOTSW: You can use a foot switch to change between wave A and wave B. When you press the switch, wave B is triggered. Otherwise, wave A is reproduced. (FOOT SW in CONTROL SW in SETUP must be set to WAVE SW. -> p. 79)

When Wave SW is set to anything but OFF, the following screens for selection of an item for Waves A and B are displayed:

WAVE [03]

WAVE [03]

When Wave SW is not set to OFF, set the following parameters as well.

Parameter	Value	Descriptions
B (Wave)	1000 (OFF), 1001 –399, C001 –500	Specify the wave number assigned to wave B. 1000 (OFF): Selected when you want no sound to be produced 1001 –399: Internal memory C001 –500: Memory card * By pressing [CARD], you can select the top number of the internal memory or of the memory card.
B Level	0–127	Set the volume of wave B.
B Pan	L15–CENTER–R15, RANDOM	Set the pan position (left-right balance) of wave B. If set to RANDOM, the pan position varies each time the sound is reproduced.

NOTE

If you change the value in Level or Pan during sound production, the sound is stopped.

HINT

If you press [FUNC] while editing the three parameters above, the screen is switched between the wave A and B screens.

When Wave SW is set to VELO, set the following parameter as well.

Parameter	Value	Descriptions
VeloSWPoint (Velocity Switch Point)	2–127	Set the threshold level. When the velocity is equivalent to or above this value, wave B is reproduced. * The velocity here refers to the value of the strike force expressed on a scale of 1 to 127.

HINT

If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.

If you hold down [SHIFT] and press [ENTER], the parameter is copied to all other pads/triggers.

PAD CONTROL

Configures pad/trigger parameters.

Configurations can be set for individual pads/triggers. Hold down [SHIFT] and press the PAGE buttons or hit a pad/trigger to change the pad/trigger. A flashing pad indicator shows that the corresponding pad/trigger is selected.

Set the following parameters. Press PAGE buttons to change the parameter and press [-]/[+] to change values.

Parameter	Value	Descriptions
Dynamics	OFF, ON	Set it to ON to change the volume according to playing velocity. When it is set to OFF, the sound is produced at a constant volume.
Effects SW (Effects Switch)	OFF, ON, VELO	This determines if the sound on any particular pad is sent to the effects. When it is set to VELO, effect parameters (those specified in VELO in individual effect types) are controlled by the strike intensity. * The pad indicators will light when this parameter is set to ON or VELO.
DynamicAtck (Dynamic Attack)	OFF, 1–3	The start or attack of the sound is reduced when the pad/trigger is hit softly and increases with playing velocity. It is suitable for sounds like percussion. * If the start point (p. 47) is not adequately defined for a wave, no satisfactory effect is produced.
Mute Group	OFF, 1–9	Pads/triggers that are assigned the same number form a mute group. Within a mute group, the sounds cancel out one another, and only the sound from the pad/trigger that's struck last is reproduced. * The lit pad indicators show that their corresponding pads/triggers belong to the same mute group.
Tempo Sync	OFF, ON	When it is set to ON, the tempo of the sound assigned to the pad is synchronized with the sync tempo of the patch (See Sync Tempo in PATCH COMMON -> p. 37). * The pad indicator is lit when this parameter is set to ON for the corresponding pad/trigger. * If you hold down [FUNC] and press [-]/[+], you can change Sync Tempo (in PATCH COMMON -> p. 37).
Note#	OFF, 0(C)–127(G9)	Determines the note number assigned to each pad, which will be transmitted from the MIDI OUT connector. See the table below for initial values. * When it is set to OFF, no note message is sent or received via MIDI. * If the same note number is assigned to more than one pads, the wave assigned to the pad/trigger with the lowest number (see the table below) will sound when the SPD-S receives note message with the note number concerned. A "*" symbol is indicated on the screen for playing surfaces with assigned sounds that are not reproduced when note message is received.
Gate Time	0.1 s–8.0 s	Allows you to determine the length (gate time) of the notes that will be transmitted from the MIDI OUT connector, on an individual pad basis. The value can be changed in steps of 0.1 second.



Volume variation cannot be activated with a foot switch.



If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.
If you hold down [SHIFT] and press [ENTER], the parameter is copied to all other pads/triggers.

Initial values of Note#

Number	Playing Surface	Initial Value	Number	Playing Surface	Initial Value
1	PAD 1	60 (C4)	8	PAD 8	67 (G4)
2	PAD 2	61 (C#4)	9	PAD 9	68 (G#4)
3	PAD 3	62 (D4)	10	TRIG IN 1	69 (A4)
4	PAD 4	63 (D#4)	11	TRIG IN 2	70 (A#4)
5	PAD 5	64 (E4)	12	FOOT SW 1	71 (B4)

Number	Playing Surface	Initial Value	Number	Playing Surface	Initial Value
6	PAD 6	65(F4)	13	FOOT SW 2	72 (C5)
7	PAD 7	66(F#4)			

Notes on Tempo Sync

- Tempo Sync is not applicable to waves of which:
 - Type (in WAVE SETUP in Wave Edit -> p. 45) is SINGLE.
 - Tempo is not within the range from 20 to 260 although Type is PHRASE.
In this event, "---" is indicated for Tempo on the screens on Beat (in WAVE SETUP in Wave Edit -> p. 46) and on Meas (in WAVE SETUP in Wave Edit -> p. 46).
 - Reverse (in WAVE SETUP in Wave Edit -> p. 46) is set to ON.
- The wave tempo is variable within the range from 50% to 130%. If Sync Tempo (in PATCH COMMON -> p. 37) exceeds this range, the wave tempo is doubled or halved so that it can stay within the range.
- When Tempo Sync is applied, there may be some outstanding noise.

EFFECTS

How to set up the EFFECTS.

Press PAGE buttons to change the parameter and press [-]/[+] to change the value.

For details on parameters of effects, see "Effect List" (p. 92).

PATCH COMMON

Set the parameters common to the whole patch.

Set the following parameters. Press PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Sync Tempo	♪=20-260	Set the sync tempo. When tempo sync is on (with Tempo Sync in PAD CONTROL set to ON -> p. 36), the tempo of the waves assigned to the pads is synchronized with this tempo. * The pad indicator is lit when Tempo Sync in PAD CONTROL is set to ON for the corresponding pad/trigger. * If you hold down [SHIFT] and hit a pad, the value of Tempo Sync in PAD CONTROL is switched (between ON and OFF). * For notes on Tempo Sync, see the top of the page. * You can also define the tempo by controlling the intervals at which you hit a pad or depress a foot switch. (Tap Tempo: Ctrl SW in CONTROL SW in Setup Edit -> p. 79)
Patch Level	0-127	Specify the volume of the patch.
Name	Patch name	Give a name to the patch. A name can have a maximum of eight characters. Press PAGE buttons to move the cursor below the name and press [-]/[+] to change the character at the cursor. * If you hold down [+] and press [-], or hold down [-] and press [+], the character changes quickly. * Hold down [SHIFT] and press [>] to insert a character, or hold down [SHIFT] and press [<] to delete a character. * Press [FUNC] to switch a letter between uppercase and lowercase. * If you hold down [SHIFT] and press [+], the character is changed in the order of "A", "a", "0", "!" and a space character. If you hold down [SHIFT] and press [-], the character is changed in the reverse order.



If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value (except on the "Name" screen).

Patch Utilities Parameters

This section describes the steps for copying, exchanging and initializing patches and/or pad parameters.

PAD COPY

This copies all parameters from one pad to another.

1. Set the following parameters.

Press PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Src (Source)	PAD 1–9, TRIG IN 1–2, FOOT SW 1–2	Hit a pad to choose the copy source. Or, you can press [-]/[+] to select it. * You can check which pad is specified by noticing which pad indicator is flashing, or by viewing the display. * Hold down [FUNC] and press [-]/[+] to change the patch to be copied from.
Dst (Destination)	PAD 1–9, TRIG IN 1–2, FOOT SW 1–2	Hit a pad to choose the copy destination. Or, you can press [-]/[+] to select it. * You can check which pad is specified by noticing which pad indicator is flashing, or by viewing the display. * Hold down [FUNC] and press [-]/[+] to change the patch to be copied to.

2. Press [>] to display “copy pad, sure?” Press [ENTER] to execute the copying, or press [<] to return to Step 1.

While copying is in progress, “now processing..” is displayed. Upon completion of the procedure, “complete!” is displayed, and you’re returned to the Patch mode.

**MIDI note number and gate time parameters are not copied.*

PAD EXCHANGE

This exchanges all parameters between one pad/trigger and another.

1. Set the following parameters.

Press PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Src (Source)	PAD 1–9, TRIG IN 1–2, FOOT SW 1–2	Hit a pad to choose the exchange source. Or, press [-]/[+] to change it. * You can check which pad is specified by noticing which pad indicator is flashing, or by viewing the display. * Hold down [FUNC] and press [-]/[+] to change the patch to be exchanged from.
Dst (Destination)	PAD 1–9, TRIG IN 1–2, FOOT SW 1–2	Hit a pad to choose the exchange destination. Or, press [-]/[+] to change it. * You can check which pad is specified by noticing which pad indicator is flashing, or by viewing the display. * Hold down [FUNC] and press [-]/[+] to change the patch at the destination of the exchange.

2. Press [>] to display “exchg pad, sure?” Press [ENTER] to execute the exchange, or press [<] to return to Step 1.

While exchanging is in progress, “now processing..” is displayed. Upon completion of the procedure, “complete!” is displayed, and you’re returned to the Patch mode.

**MIDI note number and gate time parameters are not exchanged.*

PAD INIT (Pad Initialize)

Initialize (factory reset) the parameters for a pad/trigger.



The wave number for wave A is not changed.

1. Set the following parameter.

Press PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Init (Initialize)	PAD 1–9, TRIG IN 1–2, FOOT SW 1–2	Hit a pad/trigger the one to be initialized. Or, press [-]/[+] to change it. * You can check which pad is specified by noticing which pad indicator is flashing, or by viewing the display.

2. Press [>] to display “init pad, sure?” Press [ENTER] to initialize the parameters for the playing surface, or press [<] to return to Step 1.

While initializing is in progress, “now processing..” is displayed. Upon completion of the procedure, “complete!” is displayed, and you’re returned to the Patch mode.

PATCH COPY

Copy a patch to another.

1. Set the following parameters.

Press PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Src (Source)	1–128	Specify the copy-source patch number.
Dst (Destination)	1–128	Specify the copy-destination patch number.

2. Press [>] to display “copy patch, sure?” Press [ENTER] to copy the patch, or press [<] to return to Step 1.

While copying is in progress, “now processing..” is displayed. Upon completion of the procedure, “complete!” is displayed, and you’re returned to the Patch mode.

PATCH EXCHANGE

Exchanges a patch with another. (Helpful for putting your patches in the desired order.)

1. Set the following parameters.

Press PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Src (Source)	1–128	Specify the patch number that is to be the first partner in the exchange.
Dst (Destination)	1–128	Specify the patch number that is to be the second partner in the exchange.

2. Press [>] to display “excg patch, sure?” Press [ENTER] to execute the exchange, or press [<] to return to Step 1.

While exchanging is in progress, “now processing..” is displayed. Upon completion of the procedure, “complete!” is displayed, and you’re returned to the Patch mode.

PATCH INIT (Patch Initialize)

Initializes the parameters for a patch.

- 1. A “[>] to init.” indication appears. Press [>].**
- 2. “init patch, sure?” appears. Press [ENTER] to reset the parameters for the patch to their respective initial values.**

While initializing is in progress, “now processing..” is displayed. Upon completion of the procedure, “complete!” is displayed, and you’re returned to the Patch mode.

Chapter 2 Wave Editing

Wave

A wave is a combination of a "sound material" created by sampling a sound of musical instruments, a voice or a performance and the settings at sound reproduction. A wave is assigned to a playing surface in patch mode so that it can be used in an actual performance.

The SPD-S stores a maximum of 399 waves in its internal memory and 500 waves on a memory card.

Wave Mode

To enter wave mode, press [WAVE] so it is lit.

Wave mode screen

1200MHz wave 83

Icon	Description
I	A wave stored in internal memory
C	A wave stored on the memory card

Icon	Description
⋮	A new (empty) wave
▮	A non-empty wave

Mode (p. 58)		Grade (p. 58)	
No icon	MONO	L	LONG
⋮	STEREO	S	STANDARD
		F	FINE

Selecting a wave

Press [-]/[+] to change the wave number.



If you hold down [SHIFT] and press [-]/[+], you can change the wave number in steps of 10. If you hold down [+] and press [-], or hold down [-] and press [+], the wave number changes quickly.

Checking the wave tempo and the wave length (time)

The tempo and the length (time) of a wave are displayed if you continue pressing [FUNC]. The tempo is shown in the format of "♩ = value" (or "---" when no value is set) and the length in minutes (m) and seconds (s).

(♩ = --- 0.0s)



If "1000 OFF" is selected, no sound is produced. This wave is designed so it can be assigned in patch mode to playing surfaces that you want to remain silent.



A wave of which Mode (p. 58) is STEREO or Grade (p. 58) is FINE has two voices. A wave in STEREO and in the FINE grade has four voices.



If you press [START/STOP] or hit the playing surface, the wave currently selected is played back. By pressing [ALL SOUND OFF], you can stop all sounds from being reproduced.

Jumping to the top of internal memory or the memory card

Press [CARD] to alternately jump to the top wave number in the internal memory and to that of the memory card.

Jumping to a new (empty) wave number

Hold down [SHIFT] and press [FUNC] to jump to a new (empty) wave number.

Enabling/disabling ambience

To turn ambience **ON**, hold down [SHIFT] and press [EFFECTS], so that “**Ambience ON**” appears in the display.

To turn ambience **OFF**, hold down [SHIFT] and press [EFFECTS], so that “**Ambience OFF**” appears in the display.



Ambience cannot be individually enabled or disabled for different patches.



Effects are unavailable in wave mode. [EFFECTS] is unlit.



For details on ambience, see p. 76.

Basic Operations for Wave Edit

This section describes the steps for setting wave parameters. Wave settings are made using Wave Edit.

1

Press [WAVE] so you are in wave mode.

2

Press [-]/[+] to select a wave.

3

Press [EDIT] to go into Wave Edit.

[EDIT] lights at this time.

4

Press PAGE buttons to select an item to be edited from those listed below, and then press [ENTER].

To select another item after pressing [ENTER], press [EXIT].

For details on each item, see its reference page.

- **WAVE SETUP** -> p. 45
- **START/END POINT** -> p. 47

Listed below are wave utilities. See p. 44.

- WAVE TRUNCATE
- WAVE PITCH
- WAVE CHOP
- WAVE COPY
- WAVE DELETE
- WAVE INFO (Wave Information)

5

Press PAGE buttons to choose the parameter of an item.

6

While pressing [START/STOP] or hitting a pad to monitor the sound, press [-]/[+] to change the parameter value.

7

Press [EXIT] and then repeat Steps 4 to 6 to continue Wave Edit operations. Press [WAVE] to finish Wave Edit.

The SPD-S saves the settings (with "now writing.." indicated) and then returns to the wave mode.



If you hold down [SHIFT] and press [-]/[+], you can change the wave number in steps of 10. If you hold down [+] and press [-], or hold down [-] and press [+], the wave number changes quickly.



If you have selected "1000 OFF" in Step 2 by mistake, "cannot execute!" is displayed and you cannot go into Wave Edit.



When there are any selectable items, PAGE buttons ([<], [>], or both) are lit.



When it is necessary to press [ENTER], it is flashing.



If you have selected a new (empty) wave in Step 2, no items other than WAVE COPY and WAVE INFO are indicated.



If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.

About the Wave Utilities

Please refer to the relevant reference page if you wish to make changes for any of the following wave utilities.

* Although you can select the items listed below in Step 4 (p. 43) in “Basic Operations for Wave Edit,” they are different in character from Wave Edit. Please follow the procedure described on the relevant reference pages.

- **WAVE TRUNCATE** -> p. 49
- **WAVE PITCH** -> p. 49
- **WAVE CHOP** -> p. 50
- **WAVE COPY** -> p. 51
- **WAVE DELETE** -> p. 51
- **WAVE INFO** (Wave Information) -> p. 51



Steps 1 through 4 of “Basic Operations for Wave Edit” are identical to those carried out for wave utilities.

Wave Edit Parameters

WAVE SETUP

Define the attributes of a wave.

Set the following parameters. Press the PAGE buttons to change parameters and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Type	SINGLE, PHRASE	Specify the wave type. SINGLE: For single sounds, mainly short percussion sounds. PHRASE: Produced as a phrase-for loops. The wave tempo can be synchronized with effects. (See Patch mode.) * When you change the Type value during sound production, the sound is stopped.

When you change the value of Type, the following parameters are also set automatically. (They can be individually changed afterwards.)

Parameter	SINGLE	PHRASE
Assign	POLY	MONO
Loop	OFF	ON
Reverse	OFF	OFF
Trigger	SHOT	ALTERNATE

MEMO

Priority of sound elimination when there are insufficient voices (lack of polyphony) available:

When more than eight voices are requested, SINGLE waves drop out earlier than PHRASE waves.

HINT

In general, percussion sounds should be set to SINGLE. However, with longer sounds, such as cymbals, which may get cut off while they are still sounding, please try the following settings so the disruption in the sound is not as obvious: Type = PHRASE, Assign = POLY, Loop = OFF, and Trigger = SHOT.

HINT

If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.

Chapter 2 Wave Editing

Parameter	Value	Descriptions
Assign	POLY, MONO	Select whether to produce a polyphonic sound or a monophonic sound. POLY: With repeated hits, the newly triggered sounds overlap the previous ones. MONO: With repeated hits, each newly triggered sound replaces the previous one.
Loop	OFF, ON	Enable or disable loop (continuous) playback of the wave.
Reverse	OFF, ON	Enable or disable reversed playback of the wave.
Trigger	SHOT, ALTERNATE, GATE	Define the playback mode when hitting the pad/trigger. SHOT: Sounds each time you hit the pad. ALTERNATE: Sound will alternately be triggered or muted (stop) each time you hit the pad. GATE: This setting is for using an external MIDI device to sound the SPD-S. The wave is sounded when a NOTE ON is received, and stops when a NOTE OFF arrives. When you hit a pad/trigger of the SPD-S, the wave is reproduced, then stops after the duration specified for Gate Time (p. 36) under PAD CONTROL in Patch Edit.
Name	Wave name	Give a name to the wave. A wave name can have a maximum of eight characters. Press the PAGE buttons to move the cursor below the name character and press [-]/[+] to change them. * If you hold down [+] and press [-], or hold down [-] and press [+], the character changes quickly. * Hold down [SHIFT] and press [>] to insert a character, or hold down [SHIFT] and press [<] to delete a character. * Press [FUNC] to switch a letter between uppercase and lowercase. * If you hold down [SHIFT] and press [+], the character is changed in the order of "A," "a," "0," "!" and a space character. If you hold down [SHIFT] and press [-], the character is changed in the reverse order.



When you change the value in Reverse or Trigger during sound production, the sound is stopped.



If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value (except in the "Name" screen).


When Type is set to PHRASE, set the following parameters.

Parameter	Value	Descriptions
Beat	1-13	Define the beat (time signature) of the wave. Tempo is also displayed. * If you change Beat, Tempo is automatically recalculated. For example, if you double the Beat value, Tempo is also doubled. * If you specify any Beat value that prevents the Tempo value from being within a range from 20 to 260 BPMs, a "----" indication appears for Tempo. In this case, neither wave synchronization nor effect synchronization is available in the patch mode for the wave.
Meas (Measure)	1-999	Define the number of measures in the wave. Tempo is also displayed. * If you change Meas, Tempo is automatically recalculated. For example, if you double the Meas value, Tempo is also doubled. * If you specify any Meas value that prevents the Tempo value from being within the range from 20 to 260, a "----" indication appears for Tempo. In this case, neither wave synchronization nor effect synchronization is available in the patch mode for the wave.

START/END POINT

Define the start point and an end point of a wave.

Set the following parameters. Press the PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Start	From the top (0) to just before the end of the wave	Fix the start point (where the sound begins) of the wave. * If you specify any point other than the top (0), [MARK] lights. * If you hold down [SHIFT] and press [FUNC], the value is reset to the top (0) of the wave.
End	From just after Start to the end of the wave	Specify the end point where you want the sound to end or looped back from (if Loop is set to ON) of the wave. * If you specify any point other than the end, [MARK] is lit. * If you hold down [SHIFT] and press [FUNC], the value is reset to the end of the wave.  If you press [FUNC] on this screen, the SPD-S goes to the automatic calculation of the end point.

Automatic calculation of the end point

When you want to extract part of a wave, specify the tempo, the beat and the number of measures after defining the start point to precisely fix an end point.

1. Press [FUNC] on the End screen discussed above to display “calc end point?” Then press [ENTER] to go to the Tempo screen in Step 2.
2. Set the following parameters. Press the PAGE buttons to change the parameter and press [-]/[+] to change the value.

Once you set the parameters shown below, the SPD-S automatically calculates the end point according to the time determined from them.

Parameter	Value	Descriptions
Tempo	20–260	Specify the tempo of the wave. * You can also define the tempo by controlling the intervals at which you hit a pad or depress a foot switch. (Tap Tempo: Ctrl SW in CONTROL SW in Setup Edit -> p. 79)
Beat	1–13	Specify the beat of the wave.
Measure	1–999	Specify the number of measures in the wave. * You cannot make any settings that produce a calculation result in which the end point exceeds the duration of the wave. If you try that, then "---" is displayed for the value, Set the Tempo, Beat and Measures values again to be sure the end point is within the wave duration.

3. Press [>] to display “calculate, sure?” Then, press [ENTER] to execute auto calculation of the end point, or press [<] to return to Step 2.

Once the calculation is over, a “complete!” indication appears and the SPD-S returns to the End screen mentioned above.

Marking Function

You can set the start and end points by the timing of your button operation while a wave is being played back. Take the following steps on the wave mode screen, the Start screen or the End screen (p. 47).

Changing both the start and the end points

1. Press [START/STOP] to play back a wave.
2. At the point that you want to designate as the start point, hold down [SHIFT] and press [WAVE].
[MARK] starts flashing and the Start screen is displayed.
3. At the point that you want to designate as the end point, hold down [SHIFT] and press [WAVE].
[MARK] lights steadily and the End screen is displayed.
The setting procedure is complete.
** If you fail to achieve the settings you want, hold down [SHIFT] and press [WAVE] for a moment. After [MARK] is extinguished, follow steps 1 to 3 again.*
4. Press [WAVE] to return to the wave mode.
A “now writing ...” indication appears and the settings are saved.

Changing the start point alone

1. Press [START/STOP] to play back a wave.
2. At the point that you want to designate as the start point, hold down [SHIFT] and press [WAVE].
[MARK] starts flashing and the Start screen is displayed.
3. Press [START/STOP] to stop playing back the wave.
[MARK] lights steadily. The setting procedure is complete.
** If you fail to achieve the settings you want, hold down [SHIFT] and press [WAVE] for a moment. After [MARK] is extinguished, follow steps 1 to 3 again.*
4. Press [WAVE] to return to the wave mode.
A “now writing ...” indication appears and the setting is saved.

Changing the end point alone

1. Before triggering a sound, hold down [SHIFT] and press [WAVE].
[MARK] starts flashing and the Start screen is displayed.
2. Press [START/STOP] to play back the wave.
3. At the point that you want to designate as the end point, hold down [SHIFT] and press [WAVE].
[MARK] lights steadily and the End screen is displayed.
The setting procedure is complete.
** If you fail to achieve the settings you want, hold down [SHIFT] and press [WAVE] for a moment. After [MARK] is extinguished, follow steps 1 to 3 again.*
4. Press [WAVE] to return to the wave mode.
A “now writing ...” indication appears and the setting is saved.

Canceling a mark

1. Hold down [SHIFT] and press [WAVE] for a moment so [MARK] is extinguished.
The Start screen appears.
The start point is reset to the top of the wave and the end point to the end of it.
2. Press [WAVE] to return to the wave mode.
A “now writing ...” indication appears and the setting is saved.

Wave Utilities Parameters

WAVE TRUNCATE

This preserves the wave between the start and end points specified in START/END POINT in Wave Edit, and deletes the rest permanently (conserving memory).



After executing the truncation, the wave cannot be restored to its original state.

1. “[>] to truncate” is displayed. Press [>].
2. A “truncate, sure?” indication appears. Press [ENTER] to execute truncation, or press [<] to return to Step 1.

After execution, a “complete!” indication appears and the SPD-S returns to the wave mode.

WAVE PITCH

Create a new wave with the PITCH changed keeping the original wave intact.

1. **Set the following parameters.**

Press the PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Pitch	50–200%	Define the pitch. Above 100%, the pitch is raised. Below 100%, the pitch is lowered. * Press [START/STOP] or hit a pad to listen and verify how the wave sounds. The sounds are played back monaurally (over the left channel only). In this event, Loop and Reverse (Loop and Reverse in WAVE SETUP in Wave Edit -> p. 46) are temporarily switched to OFF.
Dst (Destination)	I001–399, C001–500	Choose the wave number to which the new wave is to be saved. I001–399: To the internal memory C001–500: To the memory card * By pressing [CARD], you can select the top number of the internal memory or of the memory card. * If you press [SHIFT] and [FUNC], a new (empty) wave number is automatically selected. * While continuing to hold down [FUNC], the remaining capacity of the memory (Remain) is shown.



If the pitch is changed, there may be some outstanding noise.

2. Press [>] to display “sure?” Here, you can name the new wave. Press the PAGE buttons to move the cursor below the name characters and press [-]/[+] to change them. When you have finished entering the name, press [ENTER] to save it.

While saving is in progress, “now processing..” is displayed. After saving, “complete!” appears and the SPD-S returns to the wave mode.



While saving is in progress, do not power the unit off.

WAVE CHOP

This splits the wave currently selected into multiple waves (using sound level to define the split points). A single wave can be chopped into a maximum of nine pieces. For example, a drum phrase can be divided into pieces of individual rhythm instruments such as "bass drum," "snare" and "hi-hat."



Some phrases may not be successfully chopped, such as a phrase with many voices and a phrase containing sounds to be reproduced simultaneously.

1. Set the following parameter.

Press [-]/[+] to change the value.

Parameter	Value	Descriptions
Chop Level	1-10	Specify the level (threshold level) by which the wave is to be chopped. As the value is decreased, the wave is chopped into shorter waves.

2. Press [>] to display "chop wave, sure?" Press [ENTER] to execute chopping, or press [<] to return to Step 1.

During execution, "now processing.." is displayed. After execution, a "complete!" indication appears.

3. Set the following parameters.

Press the PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Piece	SAVE, DEL	Chopped pieces are automatically assigned to pads 1 to 9 on the SPD-S. If you hit a pad, the piece assigned to it is played back and its pad/piece number is displayed on the screen. Press [-]/[+] to specify SAVE for a piece to be saved or to specify DEL for a piece not to be saved. * To save ALL pieces, hold down [SHIFT] and press [FUNC]. * While continuing to hold down [FUNC], the remaining capacity of the memory (Remain) is indicated.
Dst (Destination)	I001-399, C001-500	Set the wave number to which a piece is to be saved. The piece with the earliest number among those set to SAVE is saved to the wave number chosen here. The other pieces are saved in sequence to the next new (empty) wave numbers. I001-399: To the internal memory C001-500: To the memory card * By pressing [CARD], you can select the top number of the internal memory or of the memory card. * If you press [SHIFT] and [FUNC], a new (empty) wave number is selected. * While continuing to hold down [FUNC], the remaining capacity of the memory (Remain) is indicated.

4. Press [>] to display "write piece?" Press [ENTER] to save it, or press [<] to return to Step 3.

While saving is in progress, "now processing.." is displayed. After saving it, a "complete!" indication appears and the SPD-S returns to the wave mode. The saved wave is named "Chop*." (The * symbol represents the piece number.)



While saving is in progress, do not power the unit off.

WAVE COPY

Copying a wave.

1. Set the following parameters.

Press the PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Src (Source)	I001-399, C001-500	Select the wave to be copied from. I001-399: From the internal memory C001-500: From the memory card * By pressing [CARD], you can select the top of the internal memory or of the memory card. * While continuing to hold down [FUNC], the remaining capacity of the memory calculated from the grade and the mode of the wave to be copied from (Remain) is indicated.
Dst (Destination)	I001-399, C001-500	Select the wave to be copied to. I001-399: To the internal memory C001-500: To the memory card * By pressing [CARD], you can select the top of the internal memory or of the memory card. * If you press [SHIFT] and [FUNC], a new (empty) wave number is selected. * While continuing to hold down [FUNC], the remaining capacity of the memory calculated from the grade and the mode of the wave to be copied from (Remain) is indicated.

2. Press [>] to display “copy wave, sure?” Press [ENTER] to execute the copying, or press [<] to return to Step 1.

While copying is in progress, "now processing.." is displayed. After execution, a “complete!” indication appears, and the SPD-S returns to the wave mode.

WAVE DELETE

Permanently erasing the currently selected wave.

1. “[>] to delete.” is indicated. Press [>].



If you hold down [SHIFT] and press [ALL SOUND OFF] in wave mode, you can jump to this screen.

2. A “delete, sure?” indication appears. Press [ENTER] to execute the deletion, or press [<] to return to Step 1.

While deleting is in progress, "now processing.." is displayed. After execution, a “complete!” indication appears and the SPD-S returns to the wave mode.

WAVE INFO

This tells you which patches are using this wave.

When it is used, the patch number and the name are displayed. Also, the pad indicator for the pad/trigger to which it is assigned is lit.

When it is used in multiple patches, the PAGE buttons are lit. Press the PAGE buttons to check the patches in sequence.

When it is NOT used, “not found” is displayed.



It's a good idea to use this function before you proceed with wave editing or WAVE DELETE.

Chapter 3 Sampling

Sample a new sound to be produced with a playing surface.



Unauthorized recording (sampling) of any audio work made by any third parties is prohibited by law, unless it is limited to special circumstances, such as private, personal enjoyment. Do not record illegally.



Roland Corporation assumes no responsibility or liability for legal penalties or claims made by copyright holders as a result of any illegal recordings made using any Roland product.

Sampling Time

The SPD-S allows you to sample to its internal memory and to a memory card for the following durations:



"LONG," "STANDARD," and "FINE" below refer to sampling grades (p. 58).



The durations listed below are applicable to sampling in mono. Sampling in stereo halves the available sampling times.

To the internal memory

LONG	STANDARD	FINE
Approx. 12 minutes	Approx. 6 minutes	Approx. 3 minutes

To a memory card

Card capacity	LONG	STANDARD	FINE
16 MByte	Approx. 12 minutes	Approx. 6 minutes	Approx. 3 minutes
32 MByte	Approx. 24 minutes	Approx. 12 minutes	Approx. 6 minutes
64 MByte	Approx. 48 minutes	Approx. 24 minutes	Approx. 12 minutes
128 MByte	Approx. 1 hours and 36 minutes	Approx. 48 minutes	Approx. 24 minutes
256 MByte	Approx. 3 hours and 13 minutes	Approx. 1 hours and 36 minutes	Approx. 48 minutes
512 MByte	Approx. 6 hours and 26 minutes	Approx. 3 hours and 13 minutes	Approx. 1 hours and 36 minutes



A memory card with backup data (p. 72) provides a shorter duration available for sampling.

Sampling Methods

Two sampling modes are available.

Patch mode:

- For using a sampled sound immediately after sampling it

**A sampled wave can be directly assigned to a patch.*

Wave mode:

- For sampling with wave numbers selected in advance
- For sampling multiple sounds in succession
- For sampling a sound that won't immediately be used in performance (for recording and storing waves)

Basic Sampling Operations

Before sampling, take the following steps.

- 1** Turn the **INPUT LEVEL** knob on the rear panel to the minimum (**MIN**) position.
- 2** Connect a sound source (microphone/CD player, etc.) to the **INPUT** jack(s) on the rear panel. (p. 20)
- 3** Turn the **MIC/LINE** switch in accordance with the device connected in Step 2.
When a microphone is connected, switch it to **MIC**.
When a CD player or an electronic instrument is connected, switch it to **LINE**.
- 4** Power up the device connected in Step 2.
- 5** Switch on the power of **SPD-S**. (p. 22)



To prevent malfunction and/or damage to speakers or other devices, always turn down the volume, and turn off the power on all devices before making any connections.

■ Sampling in Patch Mode

1

Press [PATCH] to select the patch mode.

2

Press [-]/[+] to select a patch.

3

Check if [CARD] is lit.

To sample a sound on the internal memory, press [CARD] so it is **not** lighted.

To sample a sound on the memory card, press [CARD] so it is **lit**.

4

Press [SAMPLE].

5

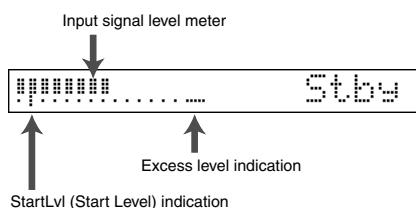
The screen displays “select dest pad.” Hit the pad on the SPD-S (or external pad/trigger), or depress the foot switch to assign a sampled wave to that trigger source. Only one can be selected at a time. To select another pad/trigger, press [EXIT] to return to patch mode.

6

“Stby” (Standby) is displayed and the pad indicator for the pad selected in Step 5 lights. Activate the device connected to INPUT jacks to control the input level.

MEMO

The sound input from INPUT jacks can be heard through the SPD-S.



Turn the INPUT LEVEL knob on the rear panel and watch level meter to maximize the input level without lighting the excess level indicator.

HINT

If you hold down [SHIFT] and press [-]/[+], you can change the patch number in steps of 10. If you hold down [+] and press [-], or hold down [-] and press [+], the patch number changes quickly.

MEMO

A flashing pad indicator indicates that the corresponding pad/trigger is off, or that an empty wave (p. 34) is assigned to it. A lighted pad indicator indicates that a sound wave is assigned to the corresponding pad/trigger.

HINT

While [FUNC] is being depressed in Steps 6–8, the remaining time for sampling (Remain) is displayed. (p. 58)

NOTE

The volume of the sound source connected to INPUT jacks must also be adjusted.

7

Press the **PAGE** buttons to set the following parameters. Press the **PAGE** buttons to change the parameter, and press **[-]/[+]** to change the value.

See p. 58 for details on the parameters.

- **StartLvl** (Start Level)
- **Mode**
- **Grade**
- **Type**

When Type is set to **PHRASE**, set the following parameters as well.

- **Tempo**
- **Beat**
- **Click Level**

8

Press **[START/STOP]** to start sampling.

- When **StartLvl** is set to **OFF** in Step 7
Sampling starts immediately. Start the performance of the device connected to the **INPUT** jacks. "Rec" is displayed while sampling is in progress.
- When **StartLvl** is set to **anything other than OFF** in Step 7
"Wait.." appears and the SPD-S enters standby mode. Start the performance of the device connected to the **INPUT** jacks. An input signal that is higher in level than the value set in **StartLvl** triggers sampling. Alternatively, press **[START/STOP]** again to start sampling. "Rec" is displayed while sampling is in progress.

9

When the performance is finished, press **[START/STOP]** to finish sampling.

10

A "write?" indication is displayed and you can name the wave. Press the **PAGE** buttons to move the cursor under the name characters and press **[-]/[+]** to change them. When the name is complete, press **[ENTER]** to save it.

A "now writing.." indication appears until the wave is saved.



If you do not want to save the wave, press **[EXIT]**, and you will return to the "Stby" (Standby) screen in Step 6.



The parameters listed on the left return to their respective initial values when sampling is finished.



Do not power the SPD-S off while sampling is in progress.



If you press **[START/STOP]** or hit a pad, you can listen the sampled sound.



Do not power the SPD-S off while saving a wave.

■ Sampling in Wave Mode

1

Press [WAVE] to select wave mode.

2

Press [-]/[+] to select a wave number where the sampled wave is to be saved.

By pressing [CARD], you can select the top number of the internal memory, or of the memory card.

3

Press [SAMPLE].



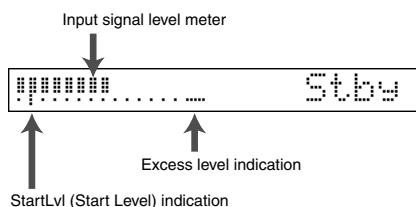
If you have selected any non-empty wave number, a new wave number is automatically selected.

4

“Stby” (Standby) is displayed and the pad indicator for the pad selected in Step 5 lights. Activate the device connected to INPUT jacks to control the input level.



The sound input from INPUT jacks can be heard through the SPD-S.



Turn the INPUT LEVEL knob on the rear panel and watch level meter to maximize the input level without lighting the excess level indicator.

5

Press the PAGE buttons to set the following parameters. Press the PAGE buttons to change the parameter, and press [-]/[+] to change the value.

See p. 58 for details on the parameters.

- **StartLvl** (Start Level)
- **Mode**
- **Grade**
- **Type**

When Type is set to PHRASE, set the following parameters as well.

- **Tempo**
- **Beat**
- **Click Level**



If you hold down [SHIFT] and press [FUNC], a new (empty) wave number is selected. If you hold down [SHIFT] and press [-]/[+], you can change the wave number in steps of 10. If you hold down [+] and press [-], or hold down [-] and press [+], the wave number changes quickly.



While [FUNC] is being depressed in Steps 4–6, the remaining time for sampling (Remain) is displayed. (p. 58)



The volume of the device connected to INPUT jacks must also be adjusted.



The parameters listed on the left return to their respective initial values when sampling is finished.

6

Press [START/STOP] to start sampling.

- When **StartLvl** is set to **OFF** in Step 5
Sampling starts immediately. Start the performance of the device connected to the INPUT jacks. “Rec” is displayed while sampling is in progress.
- When **StartLvl** is set to **anything other than OFF** in Step 5
“Wait..” appears and the SPD-S enters standby mode. Start the performance of the device connected to the INPUT jacks. An input signal that is higher in level than the value set in StartLvl triggers sampling. Alternatively, press [START/STOP] again to start sampling. “Rec” is displayed while sampling is in progress.

7

When the performance is finished, press [START/STOP] to finish sampling.

8

A “write?” indication is displayed and you can name the wave. Press the PAGE buttons to move the cursor under the name characters and press [-]/[+] to change them. When the name is complete, press [ENTER] to save it.

A “now writing..” indication appears until the wave is saved.

MEMO

If you do not want to save the wave, press [EXIT], and you will return to the “Stby” (Standby) screen in Step 4.

9

A “continue?” indication appears. Then, by pressing [ENTER], you can continue sampling with the parameter values retained as specified in Step 5. Press [EXIT] to return to the wave mode.



Do not power the SPD-S off while sampling is in progress.



If you press [START/STOP] or hit a pad, you can listen the sampled sound.



Do not power the SPD-S off while saving a wave.

Parameters for sampling

Parameter	Value	Descriptions
StartLvl (Start Level)	OFF, 1–14	Sampling starts when there is an input signal at a level equivalent to, or higher than the value specified in this parameter. The initial value is 2 . The right-hand side of the screen has a level meter. Press [-]/[+] to move the cursor and to specify the value. <div data-bbox="440 369 495 411" data-label="Image"></div> <p>A wave created by sampling a sound, especially a percussion sound, may involve a slight loss (for about 0.3 millisecond) at the beginning. To prevent this loss, it is advisable to sample the sound with StartLvl set to OFF and then to monitor the sampled sound for defining a start point (p. 48).</p>
Mode	MONO, STEREO	Select MONO or STEREO for the wave. If you select stereo, the wave uses two voices. The initial value is MONO .
Grade	LONG, STANDARD, FINE	Specify the Grade (quality) of the wave. The initial value is STANDARD . LONG: Lower sound quality than STANDARD, but uses half the memory space of STANDARD. STANDARD: Great quality sound. FINE: Highest sound quality but consumes double the memory space used by STANDARD. Two voices are utilized in this grade.
Type	SINGLE, PHRASE	Set the wave type to SINGLE or PHRASE. (p. 45) The initial value is SINGLE . Select SINGLE for ordinary sampling. Producing clicking sounds, PHRASE is useful when sampling the performance of musical instruments. When sampling a tune the tempo of which is known to you, preset the tempo and the beat to terminate sampling at a bar near the position where you press [START/STOP].

When Type is set to PHRASE, set the following parameters.

Parameter	Value	Descriptions
Tempo	20–260	Set the tempo of the wave. The initial value is 120 .
Beat	1–13	Set the beat (time signature) of the wave. The initial value is 4 .
Click Level	OFF, 1–4	Set the volume of clicking sounds to be produced. The initial value is 3 .



If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.

Other	Descriptions
Remain	Displays the remaining time in memory you can use for sampling. The duration varies depending on the Mode and the Grade. This value is for indication only. * The duration is indicated in units of minutes (m) and seconds (s) while [FUNC] is depressed in the parameter setting.

Chapter 4 Resampling an Existing Wave

You can combine multiple (up to four) waves on, or add effects to an existing wave, or change the volume, the mono/stereo status and the grade to create a new wave.

Two resampling modes are available.

Patch mode:

- Combining multiple waves to create a new wave
 - Applying effects to create a new wave
- * A resampled tone can be directly assigned to a patch.*

Wave mode:

- Changing the volume to create a new wave
- Changing the mode (mono/stereo) or the grade to create a new wave

MEMO

To enable the effects for resampling, press [EFFECTS] so it is lit.

Basic Resampling Operations

■ Resampling in Patch Mode

1

Press [PATCH] so you are in patch mode.

2

Press [-]/[+] to select a patch to be resampled.

3

Check if [CARD] is lit.

To resample a sound on the internal memory, press [CARD] so it is **not** lighted.
To resample a sound on the memory card, press [CARD] so it is **lit**.

4

Press [RESAMPLE].

5

“select src pad” appears. Hit the pad/external trigger or depress a foot switch to select the source for resampling.

The level (volume) of the playing surface reflects the hitting strength. The indicator for the selected playing surface changes from flashing to constantly lit. [SAMPLE] starts flashing. Each time you hit a playing surface, you can select and unselect it alternately. Press [EXIT] to return to patch mode.

NOTE

If you select more than four voices, an “over 4 voices!” message appears. When a wave assigned to the selected playing surface is in STEREO or FINE (p. 62), it has two voices and the number of selectable playing surfaces is decreased.

HINT

If you hold down [SHIFT] and press [-]/[+], you can change the patch number in steps of 10. If you hold down [+] and press [-], or hold down [-] and press [+], the patch number changes quickly.

HINT

By pressing [START/STOP], you can play the sound assigned to a selected pad.

NOTE

If a pad indicator is neither flashing nor lit, it means the corresponding pad/trigger cannot be selected, either because an empty wave is assigned to it, or because it is off. (p. 34)

6

Press [SAMPLE].

7

“select dest pad” appears. Hit a pad to select where the newly created wave after resampling is to be assigned (the playing surface as the resampling destination). You can select only one playing surface at a time. After the assignment, you are automatically led to the next step.

When NOT assigning a newly created wave to any patch, press [SAMPLE] again without hitting any playing surface pad.

8

“Resample Stby” (Resample Standby) appears. Pad indicators of the pads selected in Step 7 are lit. Press the PAGE buttons to set the following parameters. Press the PAGE buttons to change the parameter, and press [-]/[+] to change the value.

See p. 62 for details on the parameters.

- Gain
- Mode
- Grade
- Type
- Auto End

9

Press [START/STOP] to start resampling. “Rec” is indicated.

When **Auto End** is set to **ON** in Step 8, resampling is automatically stops. When it is set to **OFF**, press [START/STOP] again to stop resampling.

10

A “write?” indication is displayed. Assign a name to the wave. Press the PAGE buttons to move the cursor under the name and press [-]/[+] to change the character at the cursor position. When the name is complete, press [ENTER] to save it.

A “now writing..” indication appears; it shows that a wave is being saved.



If you do not want to save the wave, press [EXIT], and you will return to the “Resample Stby” screen in Step 8.



While [FUNC] is depressed in Step 7, the patch name is displayed. Press [FUNC] and [-]/[+] before hitting a playing surface to change the patch.



While [FUNC] is depressed, the remaining time for resampling (“Remain”) is displayed. (p. 62)



The parameters listed on the left are returned to their respective initial values when resampling is finished.



If you turn the CONTROL knob during resampling, the effect is also recorded.



Do not power the SPD-S off while resampling is in progress.



If you press [START/STOP] or hit a relevant playing surface, you can check the resampled sound.



Do not power the SPD-S off while saving a wave.

■ Resampling in Wave Mode

- 1** Press [WAVE] so you are in wave mode.
- 2** Press [-]/[+] to select a wave to be resampled.
- 3** Press [RESAMPLE].
- 4** “Gain” is displayed. Set the following parameters. Press the PAGE buttons to set the following parameters. Press the PAGE buttons to change the parameter, and press [-]/[+] to change the value.
See p. 62 for details on the parameters.
 - Gain
 - Mode
 - Grade
 - Type
 - Auto End
 - Dst (Destination)
- 5** Press a PAGE button to display “Stby” (Standby).
- 6** Press [START/STOP] to start resampling. “Rec” is indicated.
When Auto End is set to ON in Step 4, resampling is automatically finished. When it is set to OFF, press [START/STOP] again to finish resampling.
- 7** A “write?” indication is displayed. Assign a name to the wave. Press the PAGE buttons to move the cursor under the name and press [-]/[+] to change the character at the cursor position. When the name is complete, press [ENTER] to save it.
A “now writing..” indication appears; it shows that a wave is being saved.

MEMO

If you do not want to save the wave, press [EXIT], and you will return to the “Gain” screen in Step 4.

MEMO

The start point (p. 47, p. 48) in a wave created by resampling in patch mode or wave mode is set automatically, and “MARK” lights up.

HINT

If you hold down [SHIFT] and press [-]/[+], you can change the wave number in steps of 10. If you hold down [+] and press [-], or hold down [-] and press [+], the wave number changes quickly.

NOTE

The parameters listed on the left are returned to their respective initial values when resampling is finished.

HINT

While [FUNC] is depressed in Steps 4–6, the remaining time for resampling (“Remain”) is displayed. (p. 62)

NOTE

Do not power the SPD-S off while resampling is in progress.

HINT

If you press [START/STOP] or hit a relevant playing surface, you can check the resampled sound.

NOTE

Do not power the SPD-S off while saving a wave.

Parameters for Resampling

Parameter	Value	Descriptions	Patch (*1)	Wave (*2)
Gain	50–400%	Set the gain applied to the original wave.	100%	100%
Mode	MONO, STEREO	Select MONO or STEREO for the wave. A wave in stereo has two voices.	MONO	Same as the original wave
Grade	LONG, STANDARD, FINE	Specify the wave grade (quality). LONG: Lower sound quality than STANDARD, but uses half the memory space of STANDARD. STANDARD: Great quality sound. FINE: Highest sound quality but consumes double the memory space used by STANDARD. Two voices are utilized in this grade.	STANDARD	Same as the original wave
Type	SINGLE, PHRASE	* This parameter is valid only when resampling in patch mode. Set the wave type to SINGLE or PHRASE. (p. 45) * The initial value is SINGLE when all original waves are in SINGLE. The initial value is PHRASE if any one of the original waves is in PHRASE.	See the note in the descriptions.	N/A
Auto End	OFF, ON	Select automatic termination according to the length of the original wave, or manual termination by pressing [START/STOP].	ON	ON
Dst (Destination)	1001–399, C001–500	* This parameter is valid only when resampling in wave mode. Specify the wave number to which a created wave is to be saved. 1001–399: To the internal memory C001–500: To the memory card * By pressing [CARD], you can select the top number of the internal memory or of the memory card. * If you press [SHIFT] and [FUNC], a new (empty) wave number is selected.	N/A	The top of the new (empty) wave numbers

*1: Initial value for resampling in the patch mode

*2: Initial value for resampling in the wave mode

HINT

If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.

Other	Descriptions
Remain	Displays the duration for which new resampling is possible (the remaining time). The duration varies depending on the Mode and the Grade. This value is for indication only. * The duration is indicated in terms of minutes (m) and seconds (s) while [FUNC] is depressed in parameter setting.

Chapter 5 Layering Performances to Make a Phrase (Phrase Maker)

The Phrase Maker allows you to overdub a short rhythmical performance to make a phrase which you can then save as a new wave.



Phrase Maker produces a maximum of four voices.

Basic Operation for Phrase Maker

1

Press [PATCH] so you are in patch mode.

2

Press [-]/[+] to select a patch.

3

Press [PHRASE MAKER] for an extended time.

4

A “Standby ♩ = 120” indication appears. Press [-]/[+] to fix the tempo displayed on the screen.

For details on the tempo, see p. 65.

5

Press the PAGE buttons to set the following parameters.

Press the PAGE buttons to change the parameter, and press [-]/[+] to change the value. See p. 65 for details on the parameters.

- Quantize
- Loop Length
- Beat
- Click Level

6

Hit a pad or press [START/STOP], and phrase recording begins. “Rec” (Recording) is displayed. Strike the playing surfaces to perform a phrase. Record repeatedly in the number of measures set in Loop Length in Step 5. Press [-]/[+] to change the Quantize value.



If you hold down [SHIFT] and press [START/STOP] during recording, a “reh” (rehearsal) indication is displayed and recording cannot be temporarily disabled if any playing surface is hit. Press [SHIFT] and [START/STOP] again to return to the “Rec” indication.



If you control the EFFECTS CONTROL knob or operate an expression pedal during phrase recording, it makes changes to sound production, but not to recording.

7

Press [START/STOP] to stop recording. Later, each time you press [START/STOP], you can alternately start and stop phrase playback.

By pressing [-]/[+], you can change the playback tempo. (p. 65)



If you hold down [SHIFT] and press [-]/[+], you can change the patch number in steps of 10. If you hold down [+] and press [-], or hold down [-] and press [+], the patch number changes quickly.



If you hold down [SHIFT] and press [-]/[+], you can change the tempo value in steps of 10.



The values of the parameters on the left are remembered even while the SPD-S is powered off.



When recording is started, [START/STOP] stops flashing, and instead lights steadily.



You can also switch from “Standby” to “Rec,” between “Rec” and “reh” and between “Stop” and “Play” using a foot switch. (Ctrl SW in CONTROL SW in Setup Edit -> p. 79)



When you stop recording, [RESAMPLE] starts flashing. To do phrase resampling (p. 64), press [RESAMPLE] at this time.

8

Press [EXIT] to terminate Phrase Maker.



When you press [EXIT] to return to the original mode, the phrase that you have just created is lost. To save it, execute phrase resampling explained below.

■ Saving the Created Phrase as a New Wave (Phrase Resampling)

1

You can change the playback tempo when phrase playback is stopped (Step 7 on p. 63). Press [-]/[+].

2

Press [RESAMPLE].

3

A “Gain” indication is displayed. Set the following parameters.

Press the PAGE buttons to change the parameter, and press [-]/[+] to change the value. See p. 66 for details on the parameters.

- Gain
- Mode
- Grade
- Dst (Destination)

4

Press a [>] button to display “resample, sure?”

5

Press [Enter] to start phrase resampling.

While resampling is in progress, “now processing..” is displayed.

6

A “write?” indication is displayed. Assign a name to the wave. Press the PAGE buttons to move the cursor under the name and press [-]/[+] to change the character at the cursor position. When the name is complete, press [ENTER] to save it.

A “now writing..” indication appears; it shows that a wave is being saved.



If you do not want to save the wave, press [EXIT], and you will return to the Gain screen in Step 3.



The start point (p. 47, p. 48) in the created wave is set automatically, and “MARK” lights up.



If you hold down [SHIFT] and press [-]/[+], you can change the tempo value in steps of 10.



While [FUNC] is depressed, the remaining time for resampling (“Remain”) is displayed. (p. 66)



The parameters on the left are reset to their respective initial values when phrase resampling is finished.



Effects are disabled during phrase resampling.



Do not power the SPD-S off while resampling is in progress.



If you press [START/STOP] or hit a relevant playing surface, you can check the resampled sound.






Do not power the SPD-S off while saving a wave.

Parameters for Phrase Maker

For Phrase Recording

The following parameter values is remembered even while the SPD-S is switched off.

Parameter	Value	Descriptions
Tempo	20–260	In the standby screen, set the tempo of the phrase. * You can also define the tempo by controlling the intervals at which you hit a pad or depress a foot switch. (Tap Tempo: Ctrl SW in CONTROL SW in Setup Edit -> p. 79)
Quantize	   , OFF	Set the QUANTIZE (a function that automatically corrects discrepancies in timing) resolution of the phrase.
Loop Length	1, 2, 4, 8, 16, 32	Set the length of the phrase (Loop Length).
Beat	1–13	Set the beat (time signature) of the phrase.
Click Level	OFF, 1–4	Set the volume of the click (metronome).

For Phrase Playback

Parameter	Value	Descriptions
Tempo	20–260	* A wave created in phrase resampling reflects this tempo. Set the tempo for phrase playback. * You can also define the tempo by controlling the intervals at which you hit a pad or depress a foot switch. (Tap Tempo: Ctrl SW in CONTROL SW in Setup Edit -> p. 79)

HINT

If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.

Parameters for Phrase Resampling

Parameter	Value	Descriptions
Gain	50%–400%	Specify the gain applied to the original wave.
Mode	MONO, STEREO	Select MONO or STEREO for the wave. If you select stereo, the wave has two voices.
Grade	LONG, STANDARD, FINE	Specify the grade of the wave. LONG: produces a poorer sound quality than that of STANDARD, but consumes half the memory space that STANDARD uses. STANDARD: produces standard sound quality. FINE: produces the highest sound quality but consumes double the memory space used by STANDARD. Two voices are used in this grade.
Dst (Destination)	I001–399, C001–500	Specify the wave number to which a created wave is to be saved. I001–399: To the internal memory C001–500: To the memory card * By pressing [CARD], you can select the top number of the internal memory or of the memory card. * If you press [SHIFT] and [FUNC], a new (empty) wave number is selected



If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.

Other	Descriptions
Remain	Displays the duration for which new sampling is possible (the remaining time). The duration varies depending on the Mode and the Grade. This value is for indication only. * The duration is indicated in units of minutes (m) and seconds (s) while [FUNC] is depressed in the parameter setting.

Chapter 6 Using a CompactFlash Memory Card

This chapter explains how to use a CompactFlash memory card.

- * When the SPD-S is powered on, do not remove the CompactFlash card before the shutdown operation (p. 23). Doing so may corrupt the SPD-S's data or the data on the CompactFlash card.
- * Carefully insert the CompactFlash card all the way in-until it is firmly in place.

■ Regarding Recommended CompactFlash Cards

See the leaflet (Recommended CompactFlash) that comes with the product.

Formatting a CompactFlash Card

1

To insert a CompactFlash card, carefully open the card slot cover (left-hand side of the SPD-S).

2

Select patch mode or wave mode.

3

Press [SHIFT] and [SETUP] (CARD UTIL).

NOTE

If no CompactFlash card has been inserted, "no card!" is indicated and the SPD-S returns to the original mode.

4

Press the PAGE buttons to select "CARD FORMAT," then press [ENTER].

NOTE

When the CompactFlash card is unformatted, only "CARD FORMAT" is displayed.

5

A "[>] to format." indication appears. Press [>].

6

A "format, sure?" indication is displayed. Press [ENTER] to start formatting.

While formatting is in progress, "now processing.." is displayed. Then, the SPD-S returns to the original mode.

NOTE

All data on the Compact Flash card will be erased as the result of formatting it.

MEMO

Press [PATCH] to select the patch mode, or press [WAVE] to select wave mode.

NOTE

Do not change or delete any files or folders that have been generated in formatting the CompactFlash cards, or the SPD-S will fail to properly recognize the card.

Basic Operations of Card Utilities

1

To insert a CompactFlash card, open the card slot cover on the left-hand side of the SPD-S.

2

Select patch mode or wave mode.

3

Press [SHIFT] and [SETUP] (CARD UTIL).



If no CompactFlash card has been inserted, “no card!” is indicated and the SPD-S returns to the original mode.

4

Select a utility from the following, and then press [ENTER].

Press PAGE buttons to choose the utility parameter. See reference pages for details of the utilities.

- **FILE IMPORT** -> p. 69
- **FILE EXPORT** -> p. 71
- **BACKUP LOAD** -> p. 72
- **BACKUP SAVE** -> p. 73
- **BACKUP DELETE** -> p. 73
- **CARD FORMAT** -> p. 67



When the CompactFlash card is unformatted, only “CARD FORMAT” is displayed.



Press [PATCH] to select the patch mode, or press [WAVE] to select wave mode.



When there are any selectable utilities, PAGE buttons ([<] or [>], or both) will be lighted.



When you need to press [ENTER], it starts blinking.

Parameters for Card Utilities

FILE IMPORT

Here's how to import audio files from memory cards.



Audio files (WAV/AIFF) stored on devices such as computers can be imported via memory cards to the SPD-S.



You may not be able to work with files using the computer when the memory card has reached the "memory full!" (p. 130) stage. In such instances, reduce the amount of data on the memory card.

Notes on Importing Audio Files (WAV/AIFF)

- When you want to copy or save any audio file (WAV/AIFF) on a CompactFlash card using a computer or other device, place it at the root (uppermost level) of the CompactFlash card. The SPD-S does not import any files from anywhere other than the root.
- When importing, the SPD-S recognizes a maximum of 100 audio files.
- File names that have more than eight characters or that contain Japanese characters will not appear properly.
- Make sure that a WAV file has a **".wav"** extension and that an AIFF file has an **".aif"** extension. The SPD-S does NOT recognize any files with other extensions.
- The SPD-S supports 8 bits or 16 bits for sample bits.
- Sample rate conversion is not supported. Files are imported at the sample rate of 44.1 kHz. If any files with sample rates other than 44.1 kHz are imported, they produce a deviation in playback pitch.
- Loop points set in AIFF files are disabled.
- If you try to import any WAV/AIFF file in a format that is not supported by the SPD-S, an error message of "unsupported!" is displayed. No such file can be imported.
- No compressed audio files (WAV/AIFF) can be imported.
- It may be impossible to import audio files (WAV/AIFF) of an extremely short duration.

1. Set the following parameters.

Press the PAGE buttons to change the parameter and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Src (Source)	File name, ALL	Select the audio file(s) to be imported. If you select ALL, all audio files are imported. * When there is no audio file, a "-----" indication is displayed.
Grade	LONG, STANDARD, FINE	Select the grade of the wave. LONG: produces a poorer sound quality than that of STANDARD, but consumes half the memory space that STANDARD uses. STANDARD: produces standard sound quality. FINE: produces the highest sound quality but consumes double the memory space used by STANDARD. Two voices are used in this grade.
Dst (Destination)	1001-399, C001-500	Choose the wave number (destination) to which the audio file is to be saved. The initial value is the top number of the new (empty) waves. When you select ALL in Src above, select the wave number to which the first file is to be saved. The other files are automatically saved to new (empty) wave numbers in succession. 1001-399: To the internal memory C001-500: To the memory card * By pressing [CARD], you can select the top number of the internal memory or of the memory card. * If you hold down [SHIFT] and press [FUNC], a new (empty) wave number is selected



While [FUNC] is depressed, the remaining memory capacity (Remain) is displayed.

2. Press [>] so that "sure?" appears. Assign a name to the wave. The initial value is the file name specified for Src in Step 1. Press the PAGE buttons to move the cursor under the name and press [-]/[+] to change the character at the cursor position. When the name is complete, press [ENTER] to save it.

While saving is in progress, "now processing.." is displayed.



When you press [>] with "Src" in Step 1 set to ALL, "import all, sure?" is displayed, and wave names will be assigned automatically. After the import is executed, the SPD-S switches to wave mode.



Do not power the unit off during execution.

3. A "continue?" indication appears. If you press [ENTER], the SPD-S will return to the "Src" screen as in Step 1, where you can continue your operation. If you press [EXIT], the SPD-S will go into wave mode.

* When Src is set to ALL in Step 1, "continue?" is not displayed.

FILE EXPORT

Here's how to export waves to memory cards as audio files.

NOTE

You may not be able to work with files using the computer when the memory card has reached the "memory full!" (p. 130) stage. In such instances, reduce the amount of data on the memory card.

NOTE

When a wave that has Reverse (p. 46) set to "ON" is exported, the file that is created is not played back in reverse. Also, the start and end points (p. 47) are lost.

1. Set the following parameters.

Press the PAGE buttons to change parameters and press [-]/[+] to change the value.

Parameter	Value	Descriptions
File Type	WAV, AIFF	Select the file type for export. * This parameter value is remembered even while the SPD-S is switched off.
Src (Source)	I001–399, C001–500	Select the file to be exported. I001–399: To the internal memory C001–500: To the memory card * By pressing [CARD], you can select the top number of the internal memory or of the memory card. * If you hold down [SHIFT] and press [FUNC], a new (empty) wave number is selected. * If you press [START/STOP], you can check the wave.

2. Press [>] so that "export, sure?" appears. Press [ENTER] to export the file selected in Src in Step 1.

While exporting is in progress, "now processing.." is displayed.

NOTE

Do not power the unit off during execution.

3. A "continue?" indication appears. If you press [ENTER], the SPD-S returns to the "Src" screen as in Step 1, where you can continue your operation. If you press [EXIT], the SPD-S returns to the original mode.

NOTE

Do not power the unit off during execution.

Viewing Exported Audio Files (WAV/AIFF)

Audio files (WAV / AIFF) are exported to the root (the uppermost level) of a CompactFlash card.

When you view the root of the CompactFlash card with your computers, exported audio files (WAV / AIFF) are displayed in the following format:

I001WNDC.WAV

Wave number

First four characters of the wave name

Extension

* If the first four characters of a wave name contain any character forbidden in file names, such a character is replaced with "_" (underscore).

BACKUP LOAD

Here's how to load backup data (SPD-S settings: patch, wave, setup) from a memory card.

Icon	Description
	New (empty) backup data (will not load)
	Previously saved backup data



Once you execute this operation, the loaded backup data will replace the settings currently within the SPD-S.

1. Set the following parameter.

Press the PAGE buttons to change parameters and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Load	1-4,	1-4: To choose a set of backup data stored on a card.
	One Wave	One Wave: Selecting an individually stored wave in the backup data.

When Load was set to "1-4" in Step 1

2. Press [>] so that "load, sure?" appears. Press [ENTER] to load the backup data selected in Load in Step 1.

While loading is in progress, "now processing.." is displayed. Afterwards, the SPD-S returns to the patch mode.



Do not power the unit off during execution.

When Load was set to "One Wave" in Step 1

2. Set the following parameters as well.

Press the PAGE buttons to change parameters and press [-]/[+] to change the value.

Parameter	Value	Descriptions
Src (Source)	1001-1399, 2001-2399, 3001-3399, 4001-4399	Select the wave number(s) to be loaded from the backup data on a card. The left most digit represents the backup data set number. The bottom three digits (001 to 399) represent the wave number contained in the backup data set. * Press [FUNC] and [-]/[+] to move to the beginning of the backup data set.
Dst (Destination)	I001-399, C001-500	Select the wave number to which the wave is loaded. The initial value is the top number of the new (empty) waves. I001-399: To the internal memory C001-500: To the memory card * By pressing [CARD], you can select the top number of the internal memory or of the memory card. * If you hold down [SHIFT] and press [FUNC], a new (empty) wave number is selected. * While continuing to hold down [FUNC], the remaining capacity of the memory ("Remain") is indicated.

3. Press [>] so that "load wave, sure?" appears. Press [ENTER] to load the wave selected in Src in Step 1.



Do not power the unit off during execution.

4. A "continue?" indication appears. If you press [ENTER], the SPD-S returns to the "Src" screen as in Step 1, where you can continue your operation. If you press [EXIT], the SPD-S returns to wave mode.

BACKUP SAVE

Here's how to save backup data (SPD-S settings: patch, wave, setup) to a memory card. A maximum of four backup data sets can be saved on a card.

NOTE

If there is not enough free memory on a card, it will only be able to store a limited number of backup data sets.

1. Set the following parameter.

Press [-]/[+] to change the value.

Parameter	Value	Descriptions
Save	1-4	Select the destination number to which the backup data is to be saved. * By pressing [SHIFT] and [FUNC], you can select a new (empty) destination number.

2. Press [>] to display “sure?” Give a name to the backup data.

The initial value is Backup*. The final character (*) is the number specified in Step 1.

Press the PAGE buttons to move the cursor under the name and press [-]/[+] to change the character at the cursor position.

When the name is complete, press [ENTER] to save it.

While saving is in progress, “now processing..” is displayed. Afterwards, the SPD-S returns to the original mode.

NOTE

Do not power the unit off during execution.

BACKUP DELETE

This procedure allows you to delete backup data (SPD-S settings: patch, wave, setup) on a memory card.

1. Set the following parameter.

Press [-]/[+] to change the value.

Parameter	Value	Descriptions
Delete	1-4	Specify the backup data set to be deleted.

2. Press [>] to display “delete, sure?” Press [ENTER] to delete the backup data set.

While deleting is in progress, “now processing..” is displayed. Afterwards, the SPD-S returns to the original mode.

NOTE

Do not power the unit off during execution.

Chapter 7 Changing the Setup (Overall Environment)

This chapter describes steps for making environment settings in Setup Edit.

Basic Operations for Setup Edit

1

Set the SPD-S to the patch or wave mode.

2

Press [SETUP] to access Setup Edit.

3

Press the PAGE buttons to select an item to be edited from those listed below, and then press [ENTER].

To select another item after pressing [ENTER], press [EXIT].

For details on each item, see its reference page.

- **SYSTEM** -> p. 76
- **PAD** -> p. 77
- **CONTROL SW** (Control Switch) -> p. 79
- **TRIGGER INPUT** -> p. 80
- **MIDI** -> p. 84

Listed below are setup utilities. See p. 75.

- **BULK DUMP**
- **INIT/DELETE** (Initialize/Delete)

4

Press the PAGE buttons to change the parameter for the item.

To change settings for individual pads/triggers or foot switch, hit a pad for which the settings are to be changed to select it. A flashing pad indicator shows which pad/trigger is selected.

5

Press [-]/[+] to change the value of the parameter.

6

Press [EXIT] and then repeat Steps 3 to 5 to continue Setup Edit operations. Press [PATCH] or [WAVE] to finish Setup Edit.

The SPD-S saves the settings (with “now writing..” indicated) and then returns to the patch or wave mode.

MEMO

If you press [PATCH], the SPD-S goes into the patch mode. If you press [WAVE], it goes into wave mode.

MEMO

When there are more choices, PAGE buttons ([<], [>], or both) are lit.

MEMO

When it is necessary to press [ENTER], it is flashing.

HINT

Or, you can hold down [SHIFT] and press the PAGE buttons to choose a pad/trigger.

HINT

If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.

About the Setup Utilities

Please refer to the relevant reference page if you wish to make changes for any of the following setup utilities.

* You can select the items listed below in Step 3 (p. 74) in “Basic Operations for Setup Edit.” However, they are different in character from Setup Edit. To complete a procedure, follow the procedure described on the relevant reference page.

- **BULK DUMP** -> p. 85
- **INIT/DELETE** (Initialize/Delete) -> p. 87

MEMO

Steps 1 through 3 of “Basic Operations for Setup Edit” are identical to those carried out for the setup utilities.

Setup Edit Parameters

Settings made for the instrument as a whole.

SYSTEM

Sets the following parameters. Press PAGE buttons to change parameters and press [-]/[+] to change the value.

Parameter	Value	Descriptions
LCD Contrast	1-16	Control the contrast of the LCD (display screen). The larger the value, the deeper the display on the screen. * In patch mode, you can alternatively set the value by holding down [PATCH] and pressing [-]/[+].
Ambience	OFF, ON	Set the ambience (reverberation of a room) to be applied to the instrument as a whole. * The effect is available in the wave mode. * You can also set this parameter by holding down [SHIFT] and pressing [EFFECTS].
AmbType (Ambience Type)	SHORT-A, SHORT-B, SHORT-C, MIDDLE-A, MIDDLE-B, MIDDLE-C, LONG-A, LONG-B, LONG-C	Select the type of ambience (reverberation of a room).
Pad Chase	OFF, ON	Set the function for selecting a playing surface to be edited by striking the playing surface. It also affects the usage of note messages input from MIDI IN. ON: A pad / trigger is selected when it is struck or its corresponding note message is received. OFF: The parameter screen for a pad / trigger is not changed when a pad is struck or a note message is received. * Irrespective of the value (ON/OFF), you can select a pad / trigger by holding down [SHIFT] and pressing the PAGE buttons.
Input Mix	OFF, ON	Select whether or not the signal arriving at the INPUT jack is to be mixed with the internal sound and output. If it is set to ON, the SPD-S always outputs the signal at the INPUT jack from the OUTPUT jack. * When the SPD-S is in sampling standby (p. 54, p. 56), output takes place regardless of the ON/OFF status.
FootSwPolarity (Foot Switch Polarity)	+, -	Specify the polarity of the foot switch connected to the FOOT SW jack. * When using a DP-2, set it to "+." When using a hi-hat control Pedal (FD-6 or FD-7), set it to "-."



If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.

Other	Descriptions
Remain	Remain shows remaining recordable time in the memory. Press [-]/[+] to select the grade (FINE/STANDARD/LONG -> p. 58) so that the recordable time in mono will be displayed in minutes (m) and seconds (s). This is for display only. * Press [CARD] to select between the internal memory (indicator unlit) and the card memory (indicator lit).

PAD


Settings parameters for the pads on the SPD-S.



In the patch mode, pads can be selected individually. But here, there are only two options: “Pads 1 to 3” (edge pads) and “Pads 4 to 9” (main pads). Each group of pads shares the following parameters.

Hit a pad or press PAGE buttons while holding down [SHIFT] to change the pad. The flashing indicators tells you which ones are selected.

Set the following parameters. Press the PAGE buttons to change the parameter and press [-]/[+] to change the value.

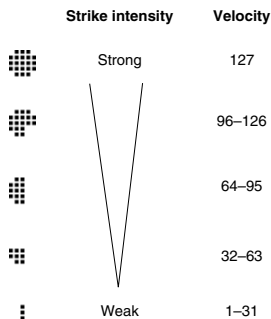
Parameter	Value	Descriptions
Sensitivity	1–16	Define the sensitivity of the pads to control the balance between the strike intensity and the sound volume. As the value increases, the sensitivity is higher, which means that a louder sound is produced with a weak strike. Specify the value while watching the velocity indication (see the box below) to ensure that the velocity is at 127 when you strike the hardest.
VeloCurve (Velocity Curve)	LINEAR, EXP1, EXP2, LOG1, LOG2, SPLINE, LOUD1, LOUD2	Choose the velocity curve (p. 78) for the pads to select the mode of change in volume according to the playing velocity.
Mask Time	0–64 (in steps of 4 ms), 96, 128, 256ms	You may hear a sound twice though you feel you have hit a pad only once. This is a parameter to prevent this phenomenon. A second trigger signal within the specified time is ignored. If the value is too large, the SPD-S cannot keep up with your repeated strikes.  If you want to play the pads with your hand, choose a slightly higher value.



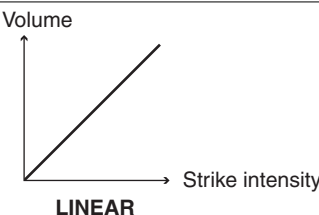
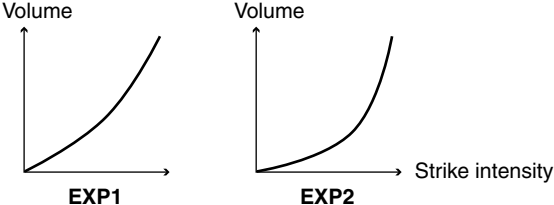
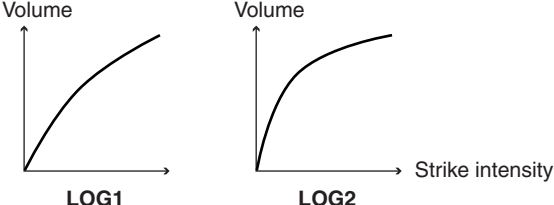
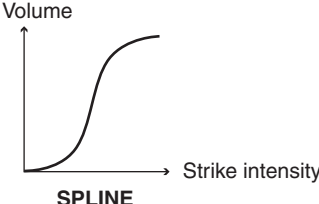
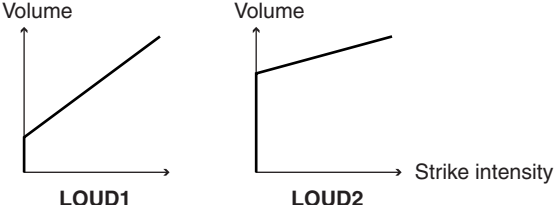
If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.
If you hold down [SHIFT] and press [ENTER], the parameter value is copied to ALL pads.

Velocity Indication

The display provides an indication of the force (velocity) used when hitting the pads.



Velocity Curves

Value	Descriptions	Curve
LINEAR	This is a standard setting. It gives the most natural volume variations in according to playing velocity.	 <p>LINEAR</p>
EXP1, EXP2	More obvious variation in response to strong hits than LINEAR.	 <p>EXP1 EXP2</p>
LOG1, LOG2	More obvious variation in response to weak hits than LINEAR.	 <p>LOG1 LOG2</p>
SPLINE	Outstanding variation according to playing velocity.	 <p>SPLINE</p>
LOUD1, LOUD2	It gives slight variation according to the strong strength to keep the volume convenient for performance. When an acoustic drum trigger is in use, it ensures stable sound reproduction.	 <p>LOUD1 LOUD2</p>

CONTROL SW

Configuring pads for functions other than making sound.

Configuration can be made for individual pad. Hit a pad or press the PAGE buttons while holding down [SHIFT] to change the pad/trigger/foot switch. You can verify the selection with the flashing pad indicators.

* The pad indicator is lit when this parameter is set to anything other than OFF for the corresponding playing surface.

Set the following parameters. Press [-]/[+] to change the value.

Parameter	Value	Descriptions
Ctrl SW (Control Switch)	For the pads on the SPD-S and external pads: OFF, PATCH +, PATCH -, TAP TEMPO, SOUND OFF For foot switches: OFF, PATCH +, PATCH -, WAVE SW, EFCTS SW, REC-REH, TAP TEMPO, SOUND OFF	Select the function to be assigned to a pad on the SPD-S, an external pad, or the foot switch. PATCH+/PATCH-: Changes the patch. WAVE SW: Switches between wave A and wave B on the pad for which WAVE SW in Wave B is set to FOOT SW in Patch Edit. EFCTS SW: Switches [EFFECTS] on the panel ON and OFF. REC-REH: Switches among "Standby -> Rec," "Rec/reh" and "Stop/Play" in Phrase Maker. TAP TEMPO: In screens where the tempo is set (such as the Standby screen in Phrase Maker), this allows you to set the tempo to the timing you demonstrate by striking a pad or depressing a foot switch. SOUND OFF: Instantly mutes ALL sounds. * The selectable functions (values) differ between pads and foot switches. * No sound is produced if a pad/trigger/foot switch has REC-REH, TAP TEMPO or SOUND OFF assigned to it.



If you hold down [SHIFT] and press [FUNC], the values for all playing surfaces are changed to OFF.



When you connect two foot switches using the PCS-31, the white plug of the PCS-31 serves as FOOT SW 1 and the red plug as FOOT SW 2.

TRIGGER INPUT

How to make settings for pads, kick triggers or acoustic drum triggers connected to the TRIG IN jacks.

Set the following parameters. Press the PAGE buttons to change parameters and press [-]/[+] to change the value.

When InputMode is set to TRGx2, Trig Type can be set for individual playing surfaces. Hit a pad/trigger or hold down [SHIFT] and press the PAGE buttons to change the pad/trigger. Verify with the flashing pad indicators.

Parameter	Value	Descriptions
InputMode (Input Mode)	HD&RM, TRGx2	Select whether or not to use rim-shot. HD&RM: To connect a single pad with rim-shot/edge-shot/bell-shot features (PD-7, PD-9, PD-80R, PD-120, CY-6, CY-12R/C, CY-12H, CY-14C, CY-15R). TRGx2: To connect two devices like pads and kick triggers. * When two pads are connected, the rim-shot/edge-shot/bell-shot features are unavailable.
Type (Trigger Type)	PD, PD-80/100, PD-80R, PD-120, KD, CY-6, CY, RT-7K, RT-5S, RT-3T	Select the trigger type (the type of pad or other device to be used) to ensure that the SPD-S can accurately receive input signals from the TRIG IN jacks. The trigger type definition leads to accurate detection of strike force, to prevention of repeated sound production, and to compatibility with rim-shots on the PD-80R or the PD-120. After selecting the trigger type, adjust the pad sensitivity if needed. See "Correspondence Table for Trigger Type" below for details on the values. * The SPD-S does NOT support the choke feature of the PD-7/9, the CY-6, the CY-12R/C, and the CY-12H/14C/15R. * The SPD-S does NOT support the three-way trigger feature of the CY-12R/C, and the CY-15R.

Correspondence Table for Trigger Type

Product to be connected	Value
PD-5/6/7/9	PD
PD-80/100	PD-80/100
PD-80R	PD-80R
PD-120	PD-120
KD-5/7/80/120	KD
CY-6	CY-6
CY-12R/C, CY-12H/14C/15R	CY
RT-7K	RT-7K
RT-5S	RT-5S
RT-3T	RT-3T

MEMO

When you connect two pads or other devices using the PCS-31 cable, the white plug of the PCS-31 serves as TRIG IN 1 and its red plug as TRIG IN 2.

NOTE

To use the rim-shot/edge-shot/bell-shot features, connect a pad using a stereo cable that comes with the pad product. In this case, you can connect one pad only.

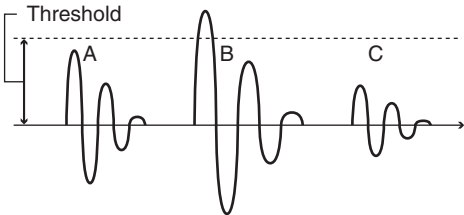
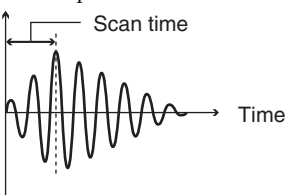
NOTE

When using pads or other devices from other manufacturers, the SPD-S may not produce a performance as designed even with settings on Trig Type or trigger parameters. We recommend using Roland products for expressive performance.

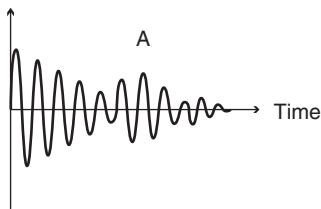
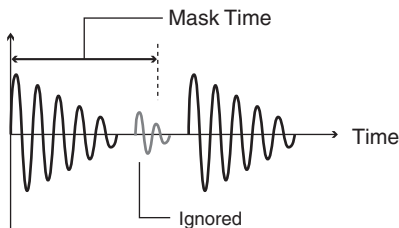




When you set Trig Type, the following parameters are set to their recommended values. However, you'll need to adjust them so they more precisely match the way your pads and other devices are mounted, and on how you use them.

When InputMode is set to TRGx2, Sensitivity, Threshold, VeloCrv, Scan Time, RetrigCancel, Mask Time, and XtalkCancel can be set for individual playing surfaces. Hit a pad/trigger or hold down [SHIFT] and press the PAGE buttons to change the pad/trigger. Verify with the flashing pad indicators.

Parameter	Value	Descriptions
Sensitivity	1–16	<p>Define the sensitivity of the pad or the like to control the balance between the strike force and the sound volume. As the value increases, the sensitivity gets higher, which means that a louder sound is produced with weak strikes.</p> <p>Specify the value while watching the velocity indication (p. 77) to ensure that the velocity is at 127 when you strike with the greatest force.</p>
Threshold	0–15	<p>Specify the strike force threshold, above which the SPD-S accepts trigger signals, to prevent the pad or the like from being affected by the vibrations around it. In the diagram below, signal B is played back, but signals A and C are not.</p>  <p>If you specify a high value, no sound is produced when you strike weakly. Raise the value gradually while hitting the pad or the like. Hit it weakly to check. If any sound is missing, lower the value slightly. Repeat this control to define the best-suited value.</p>
VeloCrv (Velocity Curve)	LINEAR, EXP1, EXP2, LOG1, LOG2, SPLINE, LOUD1, LOUD2	Specify the velocity curve (p. 78) for the pad or the like to select the mode of change in volume according to the strike force.
Scan Time	0–4.0 ms	<p>Because of a slight variation in the attack time of trigger signal depending on the pad type or the characteristics peculiar to acoustic drum triggers, the SPD-S may occasionally produce a weaker or stronger sound if you hit a pad at the same strength. In this case, define the time for the detection of trigger signal (scan time) to ensure that the strike force is correctly detected.</p> <p>As the value increases, the time until sound production is increased. Specify the smallest possible value.</p>  <p>Setting the value</p> <p>Raise the scan time value gradually from 0 ms while hitting the pad or the like at the same strength. Set Scan Time to a value at which stable sound is produced with the largest volume. At this value, hit the pad strongly and weakly to check if proper volume variation is produced.</p> <p>Specify the value while watching the velocity indication (p. 77) to ensure that the velocity is at 127 when you strike with the greatest force.</p>

Chapter 7 Changing the Setup (Overall Environment)

Parameter	Value	Descriptions
RetrigCancel (Retrigger Cancel)	1-16	<p>When you hit a snare drum equipped with an acoustic drum trigger, a sound may be improperly produced (retriggered) at point A in the following diagram as well, because the waveform is erratic.</p>  <p>This phenomenon is most likely to appear near the point where a waveform fades away. RetrigCancel detects disorder in the waveform to prevent the retriggering phenomenon.</p> <p>As the value increases, a sound is less likely to be retriggered but some sounds are more likely to fail to be produced when you repeatedly hit a drum quickly. Checking that the sound is not retriggered, specify the smallest possible value.</p> <p>HINT</p> <p>Configuration of the Mask Time (described below) can also prevent double reproduction of a sound like this. Mask Time is for ignoring a second trigger signal within the time defined after reception of the first trigger signal, whereas RetrigCancel is for detecting attenuation in trigger signal level to determine whether a trigger signal is something that has been generated with a proper strike, or is something to be ignored.</p> <p>Setting the value</p> <p>While hitting the pad or the like, raise the RetrigCancel value until the retriggering phenomenon no longer occurs.</p>
Mask Time	0-64 (in steps of 4 ms), 96, 128, 256 ms	<p>A second contact of the beater just after producing a sound, especially with a kick pad, may cause double triggering. Mask Time functions in preventing this phenomenon. A second trigger signal generated within the specified time (from 0 to 256 ms) is ignored.</p> <p>As the value increases, some sounds are more likely to fail to be produced when you quickly and repeatedly strike a kick pad. Specify the smallest possible value.</p>  <p>HINT</p> <p>If you hear a sound twice though you have hit a pad or the like only once, adjust RetrigCancel as described above.</p> <p>Setting the value</p> <p>While sounding the kick pad, raise the Mask Time value until bouncing (sound production caused by a bounce of the beater) no longer occurs.</p>

Parameter	Value	Descriptions
XtalkCancel (Crosstalk Cancel)	OFF, 20–80%	<p>For example, when two pads are mounted on a single stand, vibration generated by striking on a pad may lead to improper production of the other sound. This phenomenon is called crosstalk.</p> <p>By controlling XtalkCancel for the pad involving improper sound production, you can eliminate this phenomenon.</p> <p>With this parameter set to an excessive value, when you hit two pads at the same time, the sound assigned to the pad receiving the weaker strike is not reproduced. Specify the smallest possible value that still doesn't produce any crosstalk. If it is set to OFF, the crosstalk prevention function is disabled.</p> <div>  <p>Mounting two pads apart from each other may prevent occurrence of the crosstalk phenomenon.</p> </div> <div>  <p>This function cannot prevent crosstalk from any pads connected to other drum sound modules. Mount the pads apart from each other.</p> <p>Setting the value</p> <p>When the sound assigned to the pad on Trigger Input 2 is produced by striking the pad on Trigger Input 1:</p> <p>While hitting the pad on Trigger Input 1, set the XtalkCancel value for the pad on Trigger Input 2. Gradually raise the value from OFF until the sound of the pad on Trigger Input 2 is no longer produced with any strike on the pad on Trigger Input 1. As the value is increased, the pad on Trigger Input 2 is less prone to crosstalk from Trigger Input 1.</p> </div>

When InputMode is set to HD&RM and Type to PD-80R, PD-120 or RT-5S set the following parameter.

Parameter	Value	Descriptions
Rim Sens (Rim Sensitivity)	OFF, 1–20	Control the sensitivity of the rim. As the value increases, the rim is more likely to produce a sound. When it is set to OFF, the instrument of the head is reproduced at a rim shot. Note that if the value is too large, the instrument of the rim will be produced when you strike the head.

When InputMode is set to HD&RM, and Type is anything other than PD-80/100, RT-7K, and RT-3T, set the following parameter.

Parameter	Value	Descriptions
Rim Gain	0.5–2.0	Control the sensitivity of the rim. Configure this parameter to change the sensitivity of the rim alone with that of the head left unchanged.

HINT

If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.

With InputMode set to HD&RM, if you hold down [SHIFT] and press [ENTER], the currently displayed value is copied to the other trigger input.

MIDI

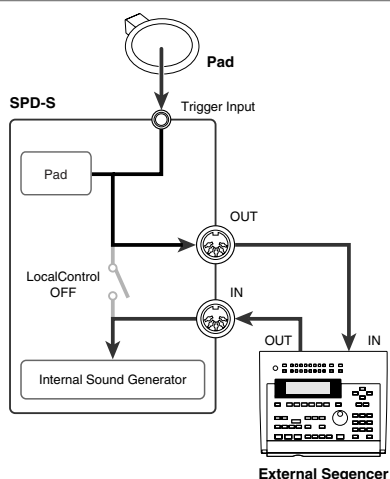
Configures the MIDI functions.

Set the following parameters. Press the PAGE buttons to change parameters and press [-]/[+] to change the value.

Parameter	Value	Descriptions
MIDI Ch (MIDI Channel)	OFF, 1-16	Set the MIDI channel. If set to OFF, the SPD-S will not send or receive any MIDI messages, including system exclusive messages.
LocalControl (Local Control)	OFF, ON	<p>Make settings for recording performance on the SPD-S using an external MIDI sequencer. Make connections as portrayed in the diagram below. Set it to OFF to first send performance data to the external sequencer and then to the SPD-S sound generator, instead of directly sending them to the SPD-S sound generator.</p> <p>OFF: Playing surfaces such as pads are separated from the SPD-S sound generator. The internal sound generator produces no sound when a playing surface is struck.</p> <p>ON: Playing surfaces such as pads are associated with the SPD-S sound generator. The internal sound generator produces sound when a playing surface is struck.</p> <p>NOTE If you record while this parameter is set to ON, the performance data that has been sent directly to the SPD-S sound generator will be mixed with the data that has travelled via the external sequencer, producing an improper performance.</p>
Soft Thru	OFF, ON	<p>Enable or disable the function to output through the MIDI OUT connector any data received at the MIDI IN connector (other than system exclusive data) in addition to the SPD-S performance data.</p> <p>HINT If this function is not necessary, set it to OFF to improve the response to performance data from the playing surfaces.</p>
Device ID	1-32	<p>It needs to be set only when you want to send individual bulk data to two or more SPD-S units at the same time. In this case, assign a unique number to each SPD-S device. In any other cases, do not change the setting.</p> <p>NOTE If you forget the device IDs used for saving data in a bulk dump, the bulk data that was saved cannot be retrieved. The factory setting is 17.</p>
PC Tx/Rx	OFF, ON	Select whether to transmit and receive program change messages. When it is set to OFF, the SPD-S does not cause or receive any effect of program change messages (generated with any change in a patch on the SPD-S) to or from external MIDI devices connected.
CC Tx/Rx	OFF, ON	Select whether to transmit and receive control change messages. When it is set to OFF, the SPD-S does not cause or receive any effect of control change messages (generated with the operation of knobs on the panel of the SPD-S) to or from external MIDI devices connected.



If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.



Setup Utilities Parameters

BULK DUMP

Settings for SPD-S setups and patches can be saved to an external MIDI device, such as a sequencer. Operate the external sequencer for recording ordinary performance data and then take the following steps for the SPD-S.



Bulk dump is one of system exclusive message. Use an external MIDI sequencer that supports recording of system exclusive messages. In addition, check if reception of system exclusive data is enabled in the settings on the sequencer.



When more than one SPD-S unit is connected, it is useful to define device IDs (Device ID in MIDI in Setup Edit -> p. 84).



See the operation manual of the external MIDI device for details on it.

1. Connect an external MIDI sequencer (as a saving destination) to the MIDI OUT connector on the SPD-S using a MIDI cable.
2. Take Steps 1 to 3 in “Basic Operations for Setup Edit” (p. 74) and then set the following parameter. Press [-]/[+] to change the value.

Parameter	Value	Descriptions
Dump	SETUP, ALL PATCHES, ALL	Select the type of settings to be saved. SETUP: setup ALL PATCHES: all patches ALL: setup and all patches

3. Start recording on the external sequencer.
4. Press [>] to display “bulk dump, sure?” Press [ENTER] to execute bulk dumping.

During transmission, “now sending” is displayed. After the transmission is finished, a “complete!” indication appears and the SPD-S returns to the “Dump” screen in Step 2.

To cancel the transmission midstream, press [EXIT].

5. Stop the external sequencer to stop recording.

Retrieving Saved Data Back to the SPD-S

Retrieves the settings saved to sequencers and other external MIDI devices to the SPD-S.

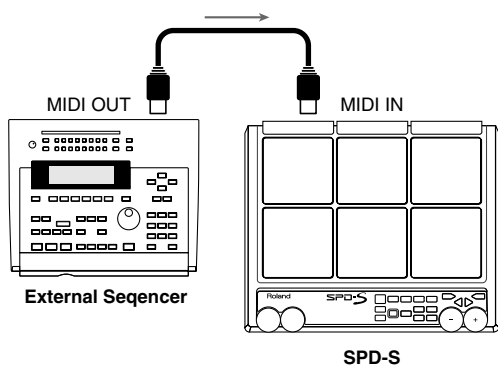
NOTE

The data stored on the SPD-S is overwritten. Save necessary data to external MIDI devices before executing this operation.

MEMO

Set the device ID (Device ID in MIDI in Setup Edit -> p. 84) used for saving bulk data.

1. **Connect the MIDI IN connector on the SPD-S to the MIDI OUT connector of an external sequencer using a MIDI cable.**



2. **Press [PATCH] to enter patch mode.**

NOTE

Bulk data cannot be retrieved in any mode other than patch mode.

3. **Transfer the settings data from the external sequencer to the SPD-S.**

The transferred settings are restored.

INIT/DELETE

Reset the SPD-S's settings to initial values, or delete all the data stored in the SPD-S.



If you execute INIT/DELETE to delete patches and waves from the internal memory, the SPD-S will produce no sound.

1. Set the following parameters. Press [-]/[+] to change the value.

Parameter	Value	Descriptions
Init Del	SETUP, ALL PATCHES, ALL WAVES, ALL	Select the target of initialization or deletion. SETUP: The setup settings are reset to their initial values. ALL PATCHES: All patches are deleted. ALL WAVES: All waves in the SPD-S are deleted. ALL: The internal memory is initialized. The setup settings are reset to their initial values and all patches and waves are deleted.

2. Press [>] to display the screen as shown in the table below. Press [ENTER] to start initialization or deletion.

During execution, "now processing..." is indicated. After the execution, a "complete!" indication appears, and the SPD-S returns to the patch mode.



Do not power the SPD-S off during execution.

Value selected in Step 1	Screen display
SETUP	init, sure?
ALL PATCHES, ALL WAVES	delete, sure?
ALL	delete all, sure?



For returning patches/waves to the factory settings, see p. 117.

Wave Protect

This feature provides protection to sampled waves to prevent them from being lost by mistake.

The wave protect setting is remembered when the SPD-S is powered off. When you next power the SPD-S on, the SPD-S is booted with the latest wave protect setting active.

Its factory setting is **ON** (enabled).

Enabling the wave protect

1. **When the wave protect is OFF (disabled), hold down [WAVE] and [SETUP], and power the SPD-S on.**

After the indication "Welcome to SPD-S," "wave protect on" appears and the wave protect is set to ON

Disabling wave protect

1. **When wave protect is ON (enabled), hold down [WAVE] and [SETUP], and power the SPD-S on.**

After the indication "Welcome to SPD-S," "wave protect off" appears and wave protect is set to OFF.



When wave protect is ON, the following operations cannot be executed with a "wave protected!" message indicated.

- WAVE TRUNCATE and WAVE DELETE in Wave Edit
- BACKUP LOAD in Card Utilities
- DELETE ALL WAVES and DELETE ALL in Setup Edit

Appendices

Shortcut List

Patch Mode

Operation	Function
[SHIFT]+[EXIT]	Cancel the effects control.
[FUNC]	Press it for a moment to lock or unlock buttons.
[EFFECTS]+[EDIT]	Jump to the effect-type selection screen in Patch Edit.
[PATCH]+[-], [PATCH]+[+]	Adjust the contrast of the display.

Patch Edit

Operation	Function	Applicable screens
[SHIFT]+[FUNC]	Load the initial value.	—
[SHIFT]+[EXIT]	Cancel the effects control.	Patch Mode, Patch Edit
[SHIFT]+[ENTER]	Copy the settings for the currently selected playing surface to all other playing surfaces.	WAVE A, WAVE B, PAD CONTROL
[SHIFT]+[<], [SHIFT]+[>]	Change or select the playing surface.	—
Hit the playing surface while holding [SHIFT]	Switch ON/OFF Effects SW in PAD CONTROL.	EFFECTS
	Switch ON/OFF Tempo Sync in PAD CONTROL.	PATCH COMMON/Sync Tempo
	[FUNC]	Switch between WAVE A screen and WAVE B screen.
		Switch the function of the EFFECTS CONTROL knob between the controller and the value dial.
[FUNC]	While held down, the pad indicators of pads for which EFFECTS SW is set to VELO light.	PAD CONTROL/Effects SW
	[FUNC]+[-], [FUNC]+[+]	Change the sync tempo.
		PAD CONTROL/Tempo Sync

Patch Utilities

Operation	Function	Applicable screens
[SHIFT]+[<], [SHIFT]+[>]	Change or select the playing surface.	—
[FUNC]+[-], [FUNC]+[+]	Confirm or select the patch.	PAD COPY, PAD EXCHANGE

Wave Mode

Operation	Function
[SHIFT]+[WAVE]	Add a mark. Press it for a moment to remove a mark.
[SHIFT]+[ALL SOUND OFF]	Jump to the wave delete screen in wave utilities.
[SHIFT]+[FUNC]	Select a new (empty) wave number.
[FUNC]	While held down, the wave tempo and length are indicated.

Wave Edit

Operation	Function	Applicable screens
[SHIFT]+[WAVE]	Add a mark. Press it for a moment to remove a mark.	Start and End in START/END POINT
[SHIFT]+[FUNC]	Load the initial value.	—
[SHIFT]+[<], [SHIFT]+[>]	Move the cursor.	Start and End in START/END POINT
[FUNC]	Execute automatic calculation of the end point.	End in START/END POINT

Wave Utilities

Operation	Function	Applicable screens
[SHIFT]+[FUNC]	Select a new (empty) wave number.	Dst
[FUNC]	While held down, Remain is indicated.	WAVE PITCH/Dst, WAVE CHOP/Piece, WAVE CHOP/Dst, WAVE COPY

Sampling

Operation	Function
[SHIFT]+[FUNC]	Load the initial value.
[FUNC]	While held down, Remain is indicated.

Resampling

Operation	Function	Applicable screens
[SHIFT]+[FUNC]	Load the initial value.	—
[FUNC]	While held down, Remain is indicated.	—
[FUNC]+[-], [FUNC]+[+]	Confirm or select a patch.	select dst pad
[SAMPLING]	Skip the selection of a playing surface.	“select dst pad” for resampling in the patch mode

Phrase Maker

Operation	Function	Applicable screens
[SHIFT]+[START/STOP]	Switch between Rec and reh (rehearsal).	Rec, reh
[SHIFT]+[FUNC]	Load the initial value.	—
[RESAMPLE]	Execute phrase resampling.	When Phrase Maker playback is stopped

Card Utilities

Operation	Function	Applicable screens
[SHIFT]+[FUNC]	Select a new (empty) wave number.	Dst
	Search for a new (empty) backup data set.	BACKUP SAVE/Save
[FUNC]+[-], [FUNC]+[+]	Confirm or select a backup data set.	BACKUP LOAD/Src (When Load is set to One Wave)

Setup Edit

Operation	Function	Applicable screens
[SHIFT]+[FUNC]	Load the initial value.	—
[SHIFT]+[ENTER]	Copy the settings for the currently selected playing surface to all other playing surfaces.	PAD, TRIGGER INPUT
[SHIFT]+[<], [SHIFT]+[>]	Change or select the playing surface.	—

Other and Common

Operation	Function	Applicable screens
[SHIFT]+[<], [SHIFT]+[>]	Insert or delete a character.	Screens for assigning a name
[FUNC]	Switch between lowercase and uppercase.	Screens for assigning a name
[SHIFT]+[-], [SHIFT]+[+]	Change the value in steps of 10.	—
Press [-] while holding [+]	Increase the value quickly.	—
Press [+] while holding [-]	Decrease the value quickly.	—
Powering the unit on while holding [WAVE] and [SETUP]	Enable or disable the wave protect.	—

Effect List

Configure the effects to be applied to a patch.

Use the PAGE buttons to select the parameter, and press [-]/[+] to change the value.

Useful Functions for Changing Effect Parameters (Patch Edit)

- The pad indicator is lit when Effects SW (p. 36) in PAD CONTROL is set to ON or VELO for the corresponding playing surface.
 - * No effects are applied to the playing surfaces for which the pad indicators are unlit.
 - * In the screen for parameter "Velo" in effect types, only the pad indicators for the playing surfaces for which Effects SW in PAD CONTROL is set to VELO are lit.
 - Each time you hold down [SHIFT] and hit a playing surface, the value of Effects SW (p. 36) in PAD CONTROL is alternately set to ON and OFF. No settings for any playing surface for which the Effects SW is set to VELO can be changed if you hold down [SHIFT] and hit it.
 - If you hold down [SHIFT] and press [FUNC], the parameter is reset to its initial value.
 - If you hold down [EFFECTS] and press [EDIT] in patch mode, the SPD-S displays the effect parameter screen.
 - If you press [FUNC] in an effect parameter screen for any parameter other than Type, Knob, Velo and Pedal, you can change the value with the EFFECTS CONTROL knob as well as with [-]/[+]. This comes in handy when you want to make a substantial change to a value. Press [FUNC] again to switch the EFFECTS CONTROL knob to its original function.
 - * For parameters with a wide value range, fine control cannot be made with the knob. Press [-]/[+] to make fine control.
 - If you rotate the EFFECTS CONTROL knob, the reproduced sound is changed although the value on the screen is not changed. If there is any difference between the reproduced sound and the value on the screen, a "*" symbol is displayed next to the value. If you hold down [SHIFT] and press [EXIT], the changes made to the effects of the patch are cancelled and the "*" symbol disappears.
- If you change the effect type, parameter values for different effect types are remembered. When you change the patch, the parameters for all the effect types other than the one currently selected are reset to their respective initial values.

Effect Type List

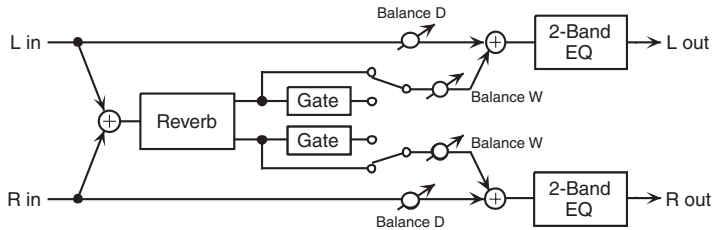
For details on each effect type, see its reference page.

1	REVERB+GATE	p. 94
2	DLYEDREVERB	p. 95
3	STEREODELAY	p. 96
4	SYNC-DELAY	p. 97
5	TAPE-ECHO	p. 97
6	CHORUS	p. 98
7	PHASER	p. 98
8	FLANGER	p. 99
9	STEPFLANGER	p. 100
10	TREMOLO/PAN	p. 101
11	SIMPLE-COMP	p. 101
12	COMP-ENHANC	p. 102
13	2BAND-COMP	p. 103
14	4BAND-PEQ	p. 104
15	FILTER	p. 105
16	ISOLATOR	p. 105
17	WAH	p. 106
18	OVERDRIVE	p. 107
19	DISTORTION	p. 108
20	LO-FI	p. 109
21	RADIOTUNING	p. 109
22	RINGMODULAT	p. 109
23	PITCHSHIFT	p. 110
24	PITCHBENDER	p. 110
25	OCTAVE	p. 111
26	VOICETRANS	p. 111
27	CENTRCANCEL	p. 112
28	SYNTH-PERC	p. 113
29	SHORTLOOPER	p. 114
30	SLICER	p. 115

Effect Parameters

1: REVERB+GATE

Adds reverb to the sound to simulate a spacious room.



Parameter	Value	Descriptions
RevType	HALL, ROOM, PLATE	HALL: reverb simulating a concert hall ROOM: reverb simulating a room PLATE: reverb simulating a metal-plate reverb unit
Time	0.1–10.0 s	Duration of the reverb
LF Damp	THRU, 50–4000 Hz	Cutoff frequency for low frequency damping (THRU: no damping)
HF Damp	1000 Hz–12.5 kHz, THRU	Cutoff frequency for high frequency damping (THRU: no damping)
Gate	OFF, ON	Gate switch. When it is ON, the gate cuts the lingering sound of the reverb, depending on the volume of the input sound.
Threshold	-60–+12 dB	Volume level at which the reverb starts to be gated (* Configurable when Gate is ON)
Hold	50–2000 ms	Duration from the moment when the level of the input sound falls below the Threshold and that when the gate starts to close (* Configurable when Gate is ON)
Release	0–200 ms	Duration from the start to the completion of the gate closing process after the Hold time has passed (* Configurable when Gate is ON)
Balance	D100:0W–D0:100W	Level balance between the original sound (D) and the reverb sound (W)
EQ Low	-12.0–+12.0 dB	Low frequency amplification/attenuation
EQ High	-12.0–+12.0 dB	High frequency amplification/attenuation

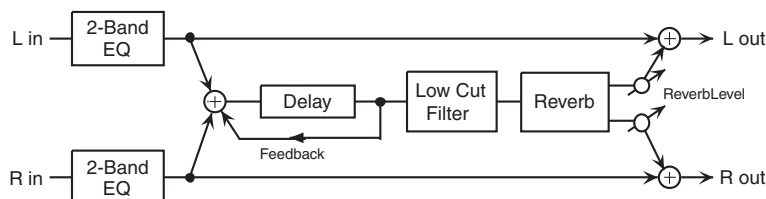
In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)	Descriptions
OFF	—	—
TIME	Time	—
BALANCE	Balance	—
WIDE	Time, HF Damp, Balance	The overall reverb effect is controlled.
COLOR	HF Damp, EQ High, LF Damp, EQ Low	Brightness of the tone is controlled.

Value	Parameters controlled with Velo (See the table above for details.)	Descriptions
OFF	—	—
TIME	Time	—
BALANCE	Balance	—
SHORT	Time, Balance	The reverb gets deeper as strike force increases. The effect is shallow.
MIDDLE	Time, Balance	The reverb gets deeper as strike force increases. The effect is intermediate.
LONG	Time, Balance	The reverb gets deeper as strike force increases. The effect is deep.
COLOR	HF Damp, EQ High, LF Damp, EQ Low	The tone gets brighter as strike force increases.

2: DLYEDREVERB (Delayed Reverb)

Adds a delay before reverb to delay the reverb sound.



Parameter	Value	Descriptions
EQ Low	-12.0→+12.0 dB	Low frequency amplification/attenuation
EQ High	-12.0→+12.0 dB	High frequency amplification/attenuation
DlyTime	1.5–2000 ms	Delay time from the start of the original sound to the start of the delay sound
DlyFeedBak	-98→+98 %	Rate at which the delay sound is fed back (Negative: reversed phase)
LowCut	THRU, 50–4000 Hz	Frequency below which the delay sound fed back to the reverb is cut off (THRU: the low cut filter disabled)
RevType	HALL, ROOM, PLATE	HALL: reverb simulating a concert hall ROOM: reverb simulating a room PLATE: reverb simulating a metal-plate reverb unit
RevTime	0.1–10.0 s	Duration of the reverb
LF Damp	THRU, 50–4000 Hz	Cutoff frequency for low frequency damping (THRU: no damping)
HF Damp	1000 Hz–12.5 kHz, THRU	Cutoff frequency for high frequency damping (THRU: no damping)
ReverbLevel	0–127	Volume level of the reverb

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

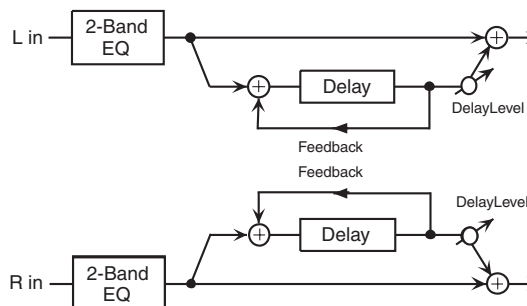
Value	Parameters controlled with Knob and Pedal (See the table above for details.)	Descriptions
OFF	—	—
DELAYTIME	DlyTime	—
DLYFEEDBAK	DlyFeedBak	—
REVTIME	RevTime	—
REVERBLEV	ReverbLevel	—
WIDE	RevTime, HF Damp, ReverbLevel	The overall reverb effect is controlled.

Value	Parameters controlled with Velo (See the table above for details.)	Descriptions
OFF	—	—
DLYFEEDBAK	DlyFeedBak	—
REVTIME	RevTime	—
REVERBLEV	ReverbLevel	—
RVTIME+LEV	RevTime, ReverbLevel	The reverb gets deeper as strike force increases.
RESOTUNE	DlyTime, DlyFeedBak	Produces a special reverb sound, the pitch of which varies depending on the strike force.

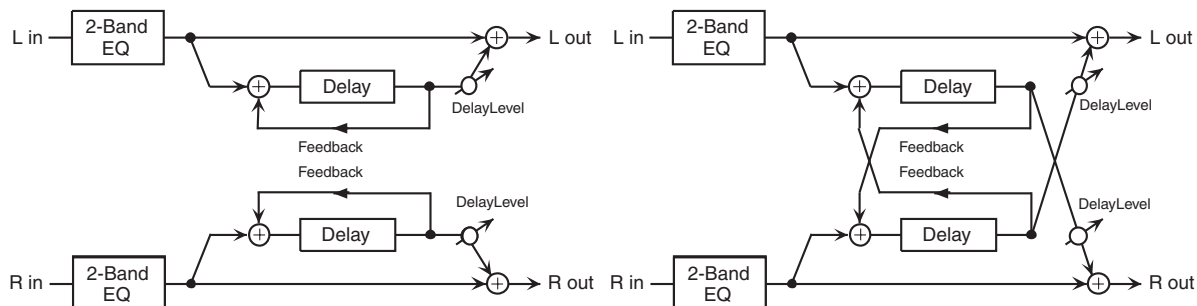
3: STERODELAY (Stereo Delay)

Adds a delay in stereo to the original sound to produce a fat sound or special effects.

When FbkMode is NORMAL



When FbkMode is CROSS




Parameter	Value	Descriptions
EQ Low	-12.0+12.0 dB	Low frequency amplification/attenuation
EQ High	-12.0+12.0 dB	High frequency amplification/attenuation
DelayL	1.5–2000 ms	Delay time from the start of the original sound to the start of the delay sound both on L and R channels
DelayR		
Feedback	-98+98%	Rate at which the delay sound is fed back (Negative: reversed phase)
FbkMode	NORMAL, CROSS	Destination into which the delay sound is fed back (See the diagram)
PhaseL	NORMAL, INVERSE	Phase of the delay sound on L/R channel NORMAL: non-inversed phase INVERSE: inversed phase
PhaseR		
LF Damp	THRU, 50–4000 Hz	Cutoff frequency for low frequency damping (THRU: no damping)
HF Damp	200 Hz–12.5 kHz, THRU	Cutoff frequency for high frequency damping (THRU: no damping)
DelayLevel	0–127	Volume level of the delay sound

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)	Descriptions
OFF	—	—
DELAYTIME	DelayL, DelayR	The delay time is controlled on both L and R channels at the same time. * When you control them, noise may be produced.
FEEDBACK	Feedback	—
DELAYLEVEL	DelayLevel	—

4: SYNC-DELAY (Sync Delay)

Adds a delay, the duration of which is specified in note length corresponding to tempo. The delay time can also be automatically adjusted to the tempo of the wave that is played back. (Effect synchronization (Phrase Sync) -> p. 116)

Parameter	Value	Descriptions
Tempo	20–260	Tempo * You can also define the tempo by controlling the intervals at which you hit a pad or depress a foot switch. (Tap Tempo: Ctrl SW in CONTROL SW in Setup Edit -> p. 79)
PhraseSync	OFF, ON	Phrase sync switch. (Effect synchronization (Phrase Sync) -> p. 116)
Beat		Note length * Settings that would result in a delay time in excess of two seconds are not permitted.
Feedback	0–98%	Rate at which the delay sound is fed back
DelayLevel	0–127	Volume level of the delay sound

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)
OFF	—
TEMPO	Tempo * Operation when set to TEMPO may produce some noise.
BEAT	Beat
FEEDBACK	Feedback
DELAYLEVEL	DelayLevel

Value	Parameters controlled with Velo (See the table above for details.)
OFF	—
FEEDBACK	Feedback
DELAYLEVEL	DelayLevel

5: TAPE-ECHO

Emulates the effects of vintage tape echo units.

Parameter	Value	Descriptions
RepeatRate	0-127	Tape speed
Intensity	0-127	Amount of repetitions of the echo sound
EffectLevel	0-127	Volume of the echo sound

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)
OFF	—
REPEATRATE	RepeatRate
INTENSITY	Intensity
EFFECTLEV	EffectLevel

6: CHORUS

Adds fatness and spaciousness to a sound.

Parameter	Value	Descriptions
Depth	0–127	Depth of sound vibration
Rate	0–127	Vibration cycle
EffectLevel	0–127	Volume of the chorus sound

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)	Descriptions
OFF	—	—
DEPTH	Depth	—
RATE	Rate	—
EFFECTLEV	EffectLevel	—
ALL	Depth, Rate, EffectLevel	All parameters are controlled at the same time.

7: PHASER

Adds a sound with a phase lag to the original sound to produce an undulating wave of sound.

Parameter	Value	Descriptions
Depth	0–127	Undulation depth
Rate	0–127	Undulation cycle
Resonance	0–127	Rate of peculiarity
EffectLevel	0–127	Volume of the effected sound

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)	Descriptions
OFF	—	—
DEPTH	Depth	—
RATE	Rate	—
RESONANCE	Resonance	—
EFFECTLEV	EffectLevel	—
DEPTH+RATE	Depth, Rate	Undulation depth and cycle are controlled at the same time.

8: FLANGER

Adds an undulating wave motion to the sound to produce a sound like that of a jet plane ascending and descending. The pitch of the flanged sound can be shifted according to the input sound level.


Parameter	Value	Descriptions
Depth	0–127	Vibration depth
Rate	0–127	Vibration cycle
Resonance	0–127	Degree of peculiarity
Manual	0–127	Pitch of the flanged sound
Sens	-63–+63	Rate of pitch shift according to the input sound level
EffectLevel	0–127	Volume of the flanged sound

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)	Descriptions
OFF	—	—
DEPTH	Depth	—
RATE	Rate	—
RESONANCE	Resonance	—
EFFECTLEV	EffectLevel	—
DEPTH+RATE	Depth, Rate	Vibration depth and cycle are controlled at the same time.
MANUAL	Rate, Manual	Vibration is stopped to control the pitch of the flanged sound.

9: STEPFLANGER (Step Flanger)

Shifts the pitch of the flanged sound in stages. The pitch shift cycle can also be specified in note length corresponding to the tempo. It is also possible to automatically adjust the tempo to that of the wave that is played back. (Effect synchronization (Phrase Sync) -> p. 116)

Parameter	Value	Descriptions
Sync	OFF, FIXED, PHRASE	Setting for synchronization of pitch shift (Effect synchronization (Phrase Sync) -> p. 116) OFF: Not synchronized FIXED: Synchronized to Tempo PHRASE: Synchronized to the tempo of the wave that is played back
Tempo	20–260	Pitch shift tempo (* Configurable when Sync is FIXED or PHRASE) * You can also define the tempo by controlling the intervals at which you hit a pad or depress a foot switch. (Tap Tempo: Ctrl SW in CONTROL SW in Setup Edit -> p. 79)
Beat		Note length in pitch shift (* Configurable when Sync is FIXED or PHRASE)
StepRate	0–127	Pitch shift cycle (* Configurable when Sync is OFF)
Depth	0–127	Vibration depth
Rate	0–127	Vibration cycle
Resonance	0–127	Degree of peculiarity of the flanged sound
Manual	0–127	Pitch of the flanged sound
Balance	D100:0W–D0:100W	Level balance between the original sound (D) and the flanged sound (W)

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)	Descriptions
OFF	—	—
TEMPO	Tempo	* Configurable when Sync is FIXED or PHRASE
STEPRATE	StepRate	* Configurable when Sync is OFF
DEPTH	Depth	—
RATE	Rate	—
RESONANCE	Resonance	—
BALANCE	Balance	—
MANUAL	Rate, Manual	Vibration is stopped to control the pitch of the flanged sound.

Value	Parameters controlled with Velo (See the table above for details.)	Descriptions
OFF	—	—
STEPRATE	StepRate	* Configurable when Sync is OFF
DEPTH	Depth	—
RATE	Rate	—
RESONANCE	Resonance	—
BALANCE	Balance	—
MANUAL	Rate, Manual	Vibration is stopped to control the pitch of the flanged sound.

10: TREMOLO/PAN

Swings the volume or the pan position periodically.

Parameter	Value	Descriptions
Rate	0–127	Rate of volume/pan swing
Depth	0–127	Amount of volume/pan swing
WaveShape	0–127	Control of the periodic wave for volume/pan swing
Mode	TREMOLO, PAN	TREMOLO: volume swing PAN: pan swing

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)
OFF	—
RATE	Rate
DEPTH	Depth
WAVESHAPE	WaveShape

11: SIMPLE-COMP (Simple Compressor)

Attenuates a high-level sound and boosts a low-level sound to compress the overall variation in volume level. It can be easily configured.

Parameter	Value	Descriptions
Sens	0–127	Compressor sensitivity

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)
OFF	—
SENS	Sens

12: COMP-ENHANC (Compressor + Enhancer)

Produces the effect of a serially connected a compressor and an enhancer. The enhancer sharpens sound to accentuate it.

Parameter	Value	Descriptions
CP Thrshd	-60–+12 dB	Level at which the compressor effect starts to be applied
CP Ratio	1.0:1, 1.2:1, 1.5:1, 2.0:1, 2.8:1, 4.0:1, 8.0:1, 16.0:1, INF:1	Rate of output compression when the compressor input level exceeds CP Thrshd (INF: infinite)
CP Atack	0.25–100 ms	Duration from the time when the compressor input level goes above CP Thrshd to the start of the effect
CP Relese	50 ms–5.00 s	Duration from the time when the compressor input level goes below CP Thrshd to the end of the effect
CP Gain	-6.0–+18.0 dB	Amplification/attenuation of the compressor output sound
EH Sens	0–127	Rate of the enhancer effect
EH MixLevel	0–127	Volume of the sound generated by the enhancer
EQ Low	-12.0–+12.0 dB	Amplification/attenuation at low frequency
EQ High	-12.0–+12.0 dB	Amplification/attenuation at high frequency

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)	Descriptions
OFF	—	—
EH SENS	EH Sens	—
EH MIXLEV	EH MixLevel	—
COMPRESS	CP Thrshd, CP Ratio, CP Gain	The rate of level compression is controlled.
PRESENCE	EH Sens, EH MixLevel, EQ High	The rate of high-frequency emphasis for accentuation is controlled.

13: 2BAND-COMP (2-Band Compressor)

Divides the input sound into two bands, high band and low band, to match the volume or to redress the balance.

Parameter	Value	Descriptions
XOver	200–2000 Hz	Frequency at which the input sound is divided into two bands
LowThrshd	-60–+12 dB	Level at which the effect starts to be applied (for low band)
LowRatio	1.0:1, 1.2:1, 1.5:1, 2.0:1, 2.8:1, 4.0:1, 8.0:1, 16.0:1, INF:1	Rate of output compression when the input level exceeds LowThrshd (for low band) (INF: infinite)
LowAttack	0.25–100 ms	Duration from the time when the input level goes above LowThrshd to the start of the effect (for low band)
LowRelease	50 ms–5.00 s	Duration from the time when the input level goes below LowThrshd to the end of the effect (for low band)
LowGain	-6.0–+18.0 dB	Amplification/attenuation of the output sound (for low band)
HiThrshd	-60–+12 dB	Level at which the effect starts to be applied (for high band)
HiRatio	1.0:1, 1.2:1, 1.5:1, 2.0:1, 2.8:1, 4.0:1, 8.0:1, 16.0:1, INF:1	Rate of output compression when the input level exceeds HiThrshd (for high band)
HiAttack	0.25–100 ms	Duration from the time when the input level goes above HiThrshd to the start of the effect (for high band)
HiRelease	50 ms–5.00 s	Duration from the time when the input level goes below HiThrshd to the end of the effect (for high band)
HiGain	-6.0–+18.0 dB	Amplification/attenuation of the output sound (for high band)

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)
OFF	—
XOVER	XOver
LOWTHRESLD	LowThrshd
HITHRESLD	HiThrshd

Value	Parameters controlled with Velo (See the table above for details.)	Descriptions
OFF	—	—
LOWCOMPRES	LowThrshd, LowRatio, LowGain	The low band level is more intensively compressed as strike force increases.
HICOMPRES	HiThrshd, HiRatio, HiGain	The high band level is more intensively compressed as strike force increases.

14: 4BAND-PEQ (4-Band Parametric Equalizer)

Controls the levels at four frequencies.

Parameter	Value	Descriptions
Freq1	50–16.0 kHz	Center frequency 1
Q1	0.5, 1.0, 2.0, 4.0, 8.0	Range of Center frequency 1 (*The larger the value, the narrower the width)
Gain1	-12.0–+12.0 dB	Amplification/attenuation at the Center frequency 1
Freq2	50–16.0 kHz	Center frequency 2
Q2	0.5, 1.0, 2.0, 4.0, 8.0	Range of Center frequency 2 (*The larger the value, the narrower the width)
Gain2	-12.0–+12.0 dB	Amplification/attenuation at the Center frequency 2
Freq3	50–16.0 kHz	Center frequency 3
Q3	0.5, 1.0, 2.0, 4.0, 8.0	Range of Center frequency 3 (*The larger the value, the narrower the width)
Gain3	-12.0–+12.0 dB	Amplification/attenuation at the Center frequency 3
Freq4	50–16.0 kHz	Center frequency 4
Q4	0.5, 1.0, 2.0, 4.0, 8.0	Range of Center frequency 4 (*The larger the value, the narrower the width)
Gain4	-12.0–+12.0 dB	Amplification/attenuation at the Center frequency 4
Total	-12.0–+12.0 dB	Output level

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)	Descriptions
OFF	—	—
FREQ1	Freq1	—
ALLFREQ	Freq1, Freq2, Freq3, Freq4	All center frequencies are shifted.

Value	Parameters controlled with Velo (See the table above for details.)	Descriptions
OFF	—	—
FREQ1	Freq1	—
GAIN1	Gain1	—
ALLFREQ	Freq1, Freq2, Freq3, Freq4	All center frequencies become higher as strike force increases.
ALLGAIN	Gain1, Gain2, Gain3, Gain4	Amplification at all center frequencies is more intensively as strike force increases.

15: FILTER

Cuts high- or low-frequency sound. With overdrive, it can modulate the cut-off frequency.

Parameter	Value	Descriptions
Cutoff	0–127	Control of the cut-off frequency
Resonance	0–127	Rate of emphasis and peculiarity on sound component at the cut-off frequency
Rate	0–127	Vibration cycle of the cut-off frequency
Depth	0–127	Vibration depth of the cut-off frequency
Drive	0–127	Rate of distortion
FilterType	LPF, HPF	LPF (Low Pass Filter): cuts off high-frequency sound HPF (High Pass Filter): cuts off low-frequency sound

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)	Descriptions
OFF	—	—
CUTOFF	Cutoff	—
RESONANCE	Resonance	—
RATE	Rate	—
DEPTH	Depth	—
DRIVE	Drive	—
COLOR	Cutoff, Resonance	CUTOFF and RESONANCE are simultaneously controlled to produce drastic changes in the tone.
RATE+DEPTH	Rate, Depth	Vibration cycle and depth are controlled at the same time.

16: ISOLATOR

Boosts or eliminates the sound at low, medium, or high frequencies.

Parameter	Value	Descriptions
Low	-64+63	Amplification/elimination of the sound at low frequencies
Mid	-64+63	Amplification/elimination of the sound at medium frequencies
High	-64+63	Amplification/elimination of the sound at high frequencies

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)	Descriptions
OFF	—	—
LOW	Low	—
MID	Mid	—
HIGH	High	—
LO>>HI	Low, Mid, High	Amplification frequency is continuously shifted from low frequency to high frequency.
LO-HI>>MID	Low, Mid, High	Amplification frequency is continuously shifted from low or high frequency to medium frequency.

Value	Parameters controlled with Velo (See the table above for details.)
OFF	—
LOW	Low
MID	Mid
HIGH	High

17: WAH

Produces a wah-wah effect.

Parameter	Value	Descriptions
Sens	0–127	Sensitivity of the wah-wah effect
Frequency	0–127	Pitch of the effected sound
Resonance	0–127	Degree of peculiarity of the wah-wah sound

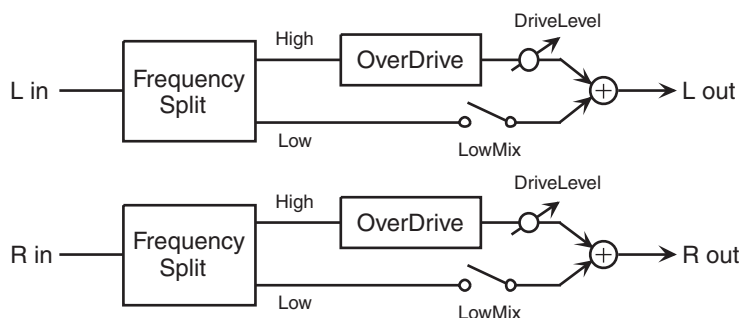
In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)	Descriptions
OFF	—	—
SENS	Sens	—
FREQUENCY	Frequency	—
RESONANCE	Resonance	—
PEDALWAH	Frequency, Sens	The sensitivity is set to 0 (zero) and the pitch of tone is controlled. It can be used like the pedal-based wah-wah effect.

Value	Parameters controlled with Velo (See the table above for details.)	Descriptions
OFF	—	—
SENS	Sens	—
FREQUENCY	Frequency	—
RESONANCE	Resonance	—
DYNAFREQ	Frequency, Sens	The sensitivity is set to 0 (zero) and the pitch of tone is controlled.

18: OVERDRIVE

Distorts a sound mildly. By outputting a sound without distortion at low frequency, a sound can be roughened without weakening the sound of drum loops and the like.



Parameter	Value	Descriptions
Drive	0–127	Rate of distortion
Tone	0–127	Tone quality
DriveCutoff	0–127	Control of the cut-off frequency at which the distorting effect is applied
DriveLevel	0–127	Volume of the distorted sound
LowMix	OFF, ON	Selection of low-frequency output

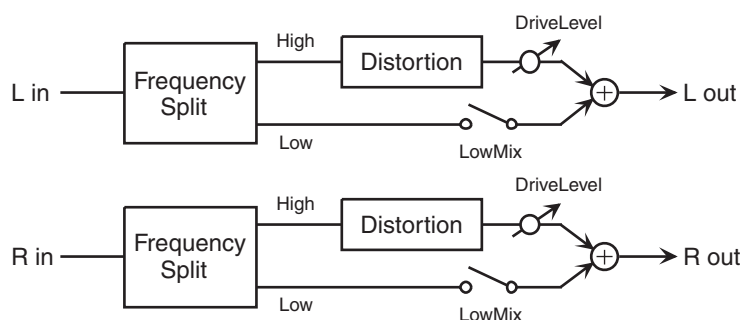
In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)
OFF	—
DRIVE	Drive
TONE	Tone
CUTOFF	DriveCutoff
DRIVELEVEL	DriveLevel

Value	Parameters controlled with Velo (See the table above for details.)	Descriptions
OFF	—	—
DRIVE	Drive	—
TONE	Tone	—
CUTOFF	DriveCutoff	—
DRIVELEVEL	DriveLevel	—
DYNAMIC	Drive, Tone, DriveCutoff, DriveLevel	The sound becomes more dynamic as strike force increases.

19: DISTORTION

Distorts a sound heavily. By outputting a sound without distortion at low frequency, a sound can be roughened without weakening the sound of drum loops and the like.



Parameter	Value	Descriptions
Drive	0–127	Rate of distortion
Tone	0–127	Tone quality
DriveCutoff	0–127	Control of the cut-off frequency at which the distorting effect is applied
DriveLevel	0–127	Volume of the distorted sound
LowMix	OFF, ON	Selection of low-frequency output

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)
OFF	—
DRIVE	Drive
TONE	Tone
CUTOFF	DriveCutoff
DRIVELEVEL	DriveLevel

Value	Parameters controlled with Velo (See the table above for details.)	Descriptions
OFF	—	—
DRIVE	Drive	—
TONE	Tone	—
CUTOFF	DriveCutoff	—
DRIVELEVEL	DriveLevel	—
DYNAMIC	Drive, Tone, DriveCutoff, DriveLevel	The sound becomes more dynamic as strike force increases.

20: LO-FI

Produces a lo-fi sound.

Parameter	Value	Descriptions
RateDown	0–127	Decrease in sampling frequency
BitDown	0–20	Decrease in bits
Filter	0–127	Control of frequency above which the sound is cut off

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)
OFF	—
RATEDOWN	RateDown
FILTER	Filter

21: RADIOTUNING

Simulates a sound coming from a radio.

Parameter	Value	Descriptions
Tuning	0–127	Radio tuning disparity
NoiseLev	0–127	Noise level
FreqRange	0–127	Tone quality

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)
OFF	—
TUNING	Tuning
NOISELEV	NoiseLevel
FREQRANGE	FreqRange

Value	Parameters controlled with Velo (See the table above for details.)
OFF	—
TUNING	Tuning
FREQRANGE	FreqRange

22: RINGMODULAT (Ring Modulator)

Changes a sound into a metallic sound. The frequency of the metallic sound can also be changed according to the input sound level.

Parameter	Value	Descriptions
Frequency	0–127	Frequency of the metallic sound
Sens	-63+63	Rate of change in frequency of the metallic sound according to the input sound level
Balance	D100:0W–D0:100W	Level balance between the original sound (D) and the effected sound (W)

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)
OFF	—
FREQUENCY	Frequency
BALANCE	Balance

23: PITCHSHIFT

Changes the pitch of the original sound.

Parameter	Value	Descriptions
Pitch	-24+24	Amount of pitch shift (in semitones)
Fine	-100+100 Cent	Fine control of the pitch (in cents)
Balance	D100:0W-D0:100W	Level balance between the original sound (D) and the sound following the shift in pitch (W)

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)
OFF	—
PITCH	Pitch
FINE	Fine
BALANCE	Balance

Value	Parameters controlled with Velo (See the table above for details.)	Descriptions
OFF	—	—
PITCH	Pitch	—
FINE+	Fine	The pitch becomes slightly higher as strike force increases.
FINE-	Fine	The pitch becomes slightly lower as strike force increases.
PENTATONIC	Pitch, Balance	The sound is shifted to a pitch on a pentatonic scale. This is effective when used with sound that has a clear pitch.
INDIA	Pitch, Balance	The sound is shifted to a pitch on the Indian scale. This is effective when used with sound that has a clear pitch.
WHOLETONE	Pitch, Balance	The sound is shifted to a pitch on a wholetone scale. This is effective when used with sound that has a clear pitch.

24: PITCHBENDER

Changes the pitch according to the input sound level. The sound following the shift in pitch can be fed back.

Parameter	Value	Descriptions
Pitch	0-127	Amount of pitch shift
Sens	-63+63	Degree of pitch variation according to the input sound level
Feedback	0-98%	Rate at which the sound following the shift in pitch is fed back
Balance	D100:0W-D0:100W	Level balance between the original sound (D) and the effected sound (W)

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)
OFF	—
PITCH	Pitch
FEEDBACK	Feedback
BALANCE	Balance

Value	Parameters controlled with Velo (See the table above for details.)	Descriptions
OFF	—	—
PITCH+	Pitch	The pitch to be shifted becomes higher as strike force increases.
PITCH-	Pitch	The pitch to be shifted becomes lower as strike force increases.
FEEDBACK	Feedback	—
BALANCE	Balance	—

25: OCTAVE

Adds a sound that is one and/or two octaves lower.

Parameter	Value	Descriptions
Cutoff	0–127	Control of frequency above which the input sound is cut off
-1OctLevel	0–127	Volume of the one-octave lower sound
-2OctLevel	0–127	Volume of the two-octave lower sound
DirectLevel	0–127	Volume of the original sound

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)	Descriptions
OFF	—	—
CUTOFF	Cutoff	—
-1OCTLEVEL	-1OctLevel	—
-2OCTLEVEL	-2OctLevel	—
DIRECTLEV	DirectLevel	—
-1 >> -2	-1OctLevel, -2OctLevel	Level balance between the sound that is one octave lower (-1Oct) and the sound that is two octaves lower (-2Oct) is controlled within the range from “-1Oct:-2Oct = 127:0” to “-1Oct:-2Oct = 0:127.”

Value	Parameters controlled with Velo (See the table above for details.)	Descriptions
OFF	—	—
-1OCTLEVEL	-1OctLevel	—
-2OCTLEVEL	-2OctLevel	—
-1 >> -2	-1OctLevel, -2OctLevel	As the strike force increases, the sound level that is two octaves lower becomes higher, while the sound level that is one octave lower becomes lower.
-2 >> -1	-1OctLevel, -2OctLevel	As the strike force increases, the sound level that is one octave lower becomes higher, while the sound level that is two octaves lower becomes lower.

26: VOICETRANS (Voice Transformer)

Processes a human voice to change how it sounds.

Parameter	Value	Descriptions
Formant	0–127	Control of characteristics of voice (formants)
Balance	D100:0W–D0:100W	Level balance between the original sound (D) and the effected sound (W)

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)
OFF	—
FORMANT	Formant
BALANCE	Balance

27: CENTRCANCEL (Center Cancellor)

Eliminates sound located at the center, such as vocals.

Parameter	Value	Descriptions
L-RBalance	L63–R63	Control of the pan position at which the sound is cancelled
Low	0–127	Amplification of low-frequency sound at the center, such as a bass sound
High	0–127	Amplification of high-frequency sound

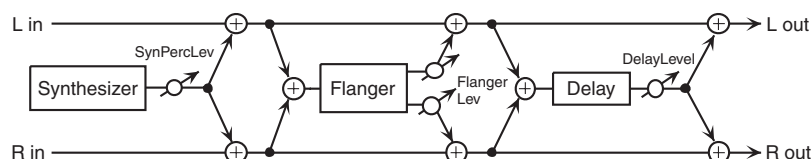
In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)
OFF	—
L-RBALANCE	L-RBalance
LOW	Low
HIGH	High

Value	Parameters controlled with Velo (See the table above for details.)
OFF	—
LOW	Low
HIGH	High

28: SYNTH-PERC (Synthesizer Percussion)

Produces a percussion sound synthesized inside the SPD-S when a pad is struck, independently from the sampled wave. Includes flanger and delay effects.



Parameter	Value	Descriptions
Tune	0–127	Pitch of the synthesized sound
NoiseLevel	0–127	Noise level of the synthesized sound
LfoFrequency	0–127	Vibration cycle of the synthesized sound
LfoDepth	0–127	Vibration depth of the synthesized sound
Sweep	0–127	Time change of the synthesized sound
Resonance	0–127	Degree of peculiarity of the synthesized sound
Release	0–127	Duration of level attenuation of the synthesized sound
Pad	PAD1–PAD9, TRIGIN1, TRIGIN2, ALL	Selection of a pad to be hit to produce the synthesized sound
PadsTuning	-63→+63	Control of difference in pitch among pads when Pad is set to ALL
SynPercLev	0–127	Volume of the synthesized sound
FlangerRate	0–127	Flanger vibration cycle
FlangerReso	0–127	Degree of peculiarity of the flanged sound
FlangerLev	0–127	Volume of the flanged sound
DelayTime	0–127	Duration of the delay
DelayFdbk	0–127	Rate at which the delayed sound is to be fed back
DelayLevel	0–127	Volume of the delayed sound

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.


Value	Parameters controlled with Knob, Velo and Pedal (See the table above for details.)	Descriptions
OFF	—	—
TUNE	Tune	—
LFOFREQ	LfoFrequency	—
LFODEPTH	LfoDepth	—
LFO	LfoFrequency, LfoDepth	Vibration cycle and depth are controlled at the same time.
SWEEP	Sweep	—
RELEASE	Release	—
FLGRATE	FlangerRate	—
FLGRESO	FlangerReso	—
FLGLEVE	FlangerLev	—
DLYTIME	DelayTime	—
DLYFDBK	DelayFdbk	—
DLYLEVEL	DelayLevel	—

29: SHORTLOOPER (Short Looper)

Loops the input sound at a short cycle.

The timing for playing back the looped sound can be automatically synchronized with the tempo of the wave played back. (Effect synchronization (Phrase Sync) -> p. 116)

It is effective for accentuation of rhythm loops.

Parameter	Value	Descriptions
LoopSw	OFF, ON	If this switch is turned ON while a sound is produced, the SPD-S plays back the sound looped at the moment. If this switch is turned OFF, the loop is cancelled and the original sound is re-produced. When you want to manually control the timing of playback of the looped sound, control this parameter with the EFFECTS CONTROL knob, etc.
LoopLength	0-127	Length of the loop
Tempo	20-260	Tempo * You can also define the tempo by controlling the intervals at which you hit a pad or depress a foot switch. (Tap Tempo: Ctrl SW in CONTROL SW in Setup Edit -> p. 79)
PhraseSync	OFF, ON	Phrase sync switch (Effect synchronization (Phrase Sync) -> p. 116)
Timing	OFF, 1-16	Timing in a measure at which the looped sound is played back (specified in sixteenth note units). When it is set to OFF, no looped sound is automatically played back.
Hold		Duration of reproducing the looped sound specified in note length

In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

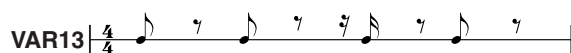
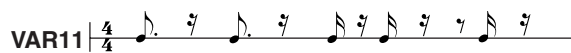
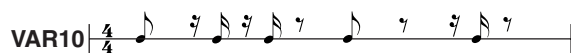
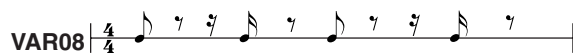
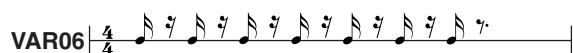
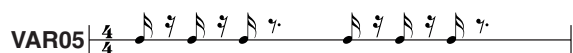
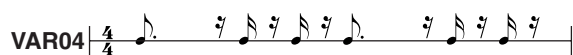
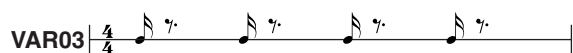
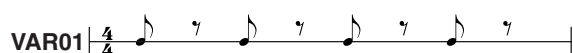
Value	Parameters controlled with Knob and Pedal (See the table above for details.)
OFF	—
LOOPSW	LoopSw
TIMING	Timing
LOOPLENGTH	LoopLength
HOLD	Hold

Value	Parameters controlled with Velo (See the table above for details.)
OFF	—
LOOPSW	LoopSw
LOOPLENGTH	LoopLength

30: SLICER

Cuts the sound in succession. The timing of the sound cutting can also be automatically adjusted to the tempo of the wave that is played back. (Effect synchronization (Phrase Sync) -> p. 116) Includes a flanger effect.

Parameter	Value	Descriptions
Tempo	20-260	Tempo * You can also define the tempo by controlling the intervals at which you hit a pad or depress a foot switch. (Tap Tempo: Ctrl SW in CONTROL SW in Setup Edit -> p. 79)
PhraseSync	OFF, ON	Phrase sync switch (Effect synchronization (Phrase Sync) -> p. 116)
Variation	VAR01-VAR16	Variation in timing of cutting off a sound (See the diagram)
Rate	x1, x2, x4, x8	Duration of the variation x1: One measure as one cycle x2: 1/2 measure as one cycle x4: 1/4 measure as one cycle x8: 1/8 measure as one cycle
Flanger	0-127	Flanger effect



In addition, if you press the PAGE buttons, “Knob,” “Velo” and “Pedal” are displayed. You can then select the parameters to be controlled with the EFFECTS CONTROL knob, the strength (velocity) used in hitting a playing surface, and the expression pedal.

Value	Parameters controlled with Knob and Pedal (See the table above for details.)
OFF	—
TEMPO	Tempo
RATE	Rate
FLANGER	Flanger

Value	Parameters controlled with Velo (See the table above for details.)
OFF	—
FLANGER	Flanger

Effect Synchronization (Phrase Sync)

The following effects can automatically be synchronized with the tempo of the wave played back. (Phrase Sync)

4: SYNC-DELAY

9: STEPFLANGER

29: SHORTLOOPER

30: SLICER

The parameters for these effect types include Tempo and PhraseSync (or Sync for STEPFLANGER).

- When PhraseSync is set to OFF, or when Sync is set to FIXED for STEPFLANGER, the effect sound is synchronized with an effect parameter of Tempo. While a wave is played back, synchronization is not redone.
- When PhraseSync is set to ON, or when Sync is set to PHRASE for STEPFLANGER and if the wave played back has any tempo, the effect sound is synchronized with the tempo. Even when they are being synchronized with the tempo of the wave currently played back, the effect sound is resynchronized with the tempo of the wave playback later. If the played back wave has no tempo, synchronization is made with the Tempo of the effect parameter. In this case, synchronization is not redone while any wave is played back.

Restoring the Factory Settings Using the Accompanying CD

The accompanying CD contains audio signals for sampling on the SPD-S and digital data for restoring the SPD-S to its factory settings.

Restoring Patches and Waves to the Factory Settings



Once you execute this operation, you will lose all the patches and waves stored in the internal memory. Back up such data beforehand if needed. (BACKUP SAVE in card utilities -> p. 73)

Prepare the following items:

- A computer with a CD-ROM drive
- A card reader that supports CompactFlash cards
- The accompanying CD
- A CompactFlash card (formatted using the SPD-S)



Formatting using the SPD-S -> p. 67

Take the following steps:

1. **Connect the card reader to the computer to ensure that it can be used.**



For connecting the card reader to the computer and using them, see their respective operation manuals.

2. **Load the accompanying CD into the CD-ROM drive.**
3. **Insert the CompactFlash card into the card reader.**
4. **Copy the “FCTRY” folder on the accompanying CD to the “ROLAND” folder on the CompactFlash card.**



If the “ROLAND” folder on the CompactFlash card already has a “FCTRY” folder, delete the “FCTRY” folder before copying.

5. **Eject the CompactFlash card to which the copying was done in Step 4 from the card reader. Then, make sure that the SPD-S is powered off and insert it into the card slot of the SPD-S.**
6. **While holding down [PATCH], [WAVE], and [CARD] switch ON the SPD-S.**



After powering it on, hold down the three buttons until “[ENTER] to Load” appears.

Restoring the Factory Settings Using the Accompanying CD

7. “[ENTER] to Load” appears. Release the three buttons. Next, press [ENTER].

Data transfer from the CompactFlash card to the SPD-S begins. It takes a few minutes until it is complete.



During the data transfer, do not eject the CompactFlash card from the card slot and do not switch off power to the SPD-S. Doing so could not only destroy the data, but also cause problems for the SPD-S.

8. “Load Completed!” appears, and the data transfer is complete. Now, eject the CompactFlash card, power the SPD-S off, then power it on again.

MIDI Implementation

Model SPD-S
Version 1.00
February.14 2003

1. Receive data

- * In wave mode, the SPD-S receives no messages other than active sensing.
- * MIDI messages received are not included in Phrase Maker data.

■Channel Voice Messages

- * Following Channel Voice Messages can be recorded in SETUP/MIDI/MIDI Channel.

●Note Off

Status	2nd byte	3rd byte
8nH	kkH	vvH
9nH	kkH	00H

n = MIDI channel number: 0H - FH (ch.1 - ch.16)

kk = note number: 00H - 7FH (0 - 127)

vv = note off velocity: 00H - 7FH (0 - 127)

- * The Velocity Values of Note Off message are ignored.
- * For a wave in which the trigger mode is set to SHOT or ALT, Note Off messages are ignored.

●Note On

Status	2nd byte	3rd byte
9nH	kkH	vvH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)

kk = note number: 00H - 7FH (0 - 127)

vv = note on velocity: 01H - 7FH (1 - 127)

- * For a wave in which the trigger mode is set to ALT, a sound is alternately generated and muted each time a Note On message is received.

●Control Change

- * Not Received when SETUP/MIDI/CC TX/RX Switch is set to "OFF." (Initial Value is ON)

○Foot Control (Controller number 4)

Status	2nd byte	3rd byte
BnH	04H	vvH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)

vv = Control value: 00H - 7FH (0 - 127) 0-63=OFF, 64-127=ON

- * This is used as the data of the "WAVE SW" function of the Foot Switch.

○Expression (Controller number 11)

Status	2nd byte	3rd byte
BnH	0BH	vvH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)

vv = Control value: 00H - 7FH (0 - 127)

- * This is used as the data of the Expression Pedal.

○Effect Control 1 (Controller number 12)

Status	2nd byte	3rd byte
BnH	0CH	vvH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)

vv = Control value: 00H - 7FH (0 - 127)

- * This is used as the data of the EFFECTS CONTROL knob.

○Effect Control 2 (Controller number 13)

Status	2nd byte	3rd byte
BnH	0DH	vvH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)

vv = Control value: 00H - 7FH (0 - 127)

- * This is used as the data of the Velocity Control.

●Program Change

Status	2nd byte
CnH	ppH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)

pp = Program number: 00H - 7FH (prog.1 - prog.128)

- * Not Received when SETUP/MIDI/PC TX/RX Switch is set to "OFF".(Initial Value is ON)
- * The sound will change beginning with the next note-on after the program change is received. Waves with the Trigger mode set to "SHOT" and Loop set to "OFF" that were already being played prior to reception of the program change are not affected.

■Channel Mode Messages

- * Following Channel Mode Messages can be received on channel specified in SETUP/MIDI/MIDI Channel.

●All Sounds Off (Controller number 120)

Status	2nd byte	3rd byte
BnH	78H	00H

n = MIDI channel number: 0H - FH (ch.1 - ch.16)

- * When this message is received, all currently-sounding notes will be silenced. However, the status of channel messages will not change.

●Reset All Controllers (Controller number 121)

Status	2nd byte	3rd byte
BnH	79H	00H

n = MIDI channel number: 0H - FH (ch.1 - ch.16)

- * When this message is received, the following controllers will be set to their reset values.

Controller	Reset value
Foot Control	0 (off)
Expression	0 (off)
Effect Control 1	0 (off)
Effect Control 2	0 (off)

●All Notes Off (Controller number 123)

Status	2nd byte	3rd byte
BnH	7BH	00H

n = MIDI channel number: 0H - FH (ch.1 - ch.16)

- * When an All Notes Off message is received, all notes that are set to “on” are turned “off” except waves in which the trigger mode is set to SHOT or ALT.

■System Realtime Message

●Active Sensing

Status
FEH

- * When Active Sensing is received, the unit will begin monitoring the intervals of all further messages. While monitoring, if the interval between messages exceeds about 420ms, the same processing will be carried out as when All Sounds Off, All Notes Off and Reset All Controllers are received, and message interval monitoring will be halted.

■System Exclusive Message

Status	Data byte	Status
F0H	iiH, ddH,, eeH	F7H

F0H: System Exclusive Message status
 ii = ID number: an ID number (manufacturer ID) to indicate the manufacturer whose Exclusive message this is. Roland's manufacturer ID is 41H.
 ID numbers 7EH and 7FH are extensions of the MIDI standard; Universal Non-realtime Messages (7EH) and Universal Realtime Messages (7FH).
 dd, ..., ee = data: 00H - 7FH (0 - 127)
 F7H: EOX (End Of Exclusive)

The System Exclusive Messages received by SPD-S are; Universal Non-realtime System Exclusive Messages, Data Requests (RQ1), and Data Set (DT1).

●Universal Non-realtime System Exclusive Messages

○Identity Request

Status	Data byte	Status
F0H	7EH, dev, 06H, 01HF7H	

Byte	Explanation
F0H	Exclusive status
7EH	ID number (universal non-realtime message)
dev	Device ID (dev:00H - 1FH (1 - 32) Initial value is 10H (17))
06H, 01H	Identity request
F7H	EOX (End Of Exclusive)

- * Even if the Device ID is 7FH (Broadcast), Identity reply message will be transmitted.
- * When Identity Request is received, Identity reply message will be transmitted (Page 122).

●Data transmission

The SPD-S supports bulk dumping/loading of patch parameters and setup parameters with the use of exclusive messages. It does not send or receive individual parameters. The exclusive message of SPD-S's data has a model ID of 00H 67H and a device ID of 10H (17). Device ID can be changed in SPD-S.

○Request data 1 RQ1 (11H)

This message requests the other device to send data. When a Data Request message is received, if the device is ready to transmit data and if the address and size are appropriate, the requested data will be transmitted as a “Data Set 1 (DT1)” message. If not, nothing will be transmitted. The only data request messages that the SPD-S can receive are Bulk Dump Request messages.

Status	Data byte	Status
F0H	41H, dev, 00H, 67H, 11H, aaH, bbH, ccH, ddH, ssH, ttH, uuH, vvH, sum	F7H
Byte	Explanation	
F0H	Exclusive status	
41H	ID number (Roland)	
dev	Device ID (dev: 00H - 1FH (1 - 32) Initial value is 10H (17))	
00H 67H	Model ID (SPD-S)	
11H	Command ID (RQ1)	
aaH	Address MSB: upper byte of the starting address of the requested data	
bbH	Address 2nd: 2nd byte of the starting address of the requested data	
ccH	Address 3rd: 3rd byte of the starting address of the requested data	
ddH	Address LSB: lower byte of the starting address of the requested data	
ssH	Size MSB	
ttH	Size 2nd	
uuH	Size 3rd	
vvH	Size LSB	
sum	Checksum	
F7H	EOX (End Of Exclusive)	

- * Regarding the checksum please refer to Page 123.
- * For Bulk Dump Request, you must use the Address and Size listed in the following Bulk Dump Request.

Parameter Dump Request

Address (H)	Size (H)
70 00 00 00	00 00 00 00 (SETUP: request for all setup except Device ID and LCD Contrast)
71 00 00 00	00 00 00 00 (ALL PATCHES: dump request for all patches)

○Data set 1 DT1 (12H)

This is the message that actually performs data transmission.
The SPD-S only receives bulk data.

Status	Data byte	Status
F0H	41H, dev, 00H, 67H, 12H, aaH, bbH, ccH, ddH, eeH,... ffH, sum	F7H
Byte	Explanation	
F0H	Exclusive status	
41H	ID number (Roland)	
dev	Device ID (dev: 00H - 1FH (1 - 32) Initial value is 10H (17))	
00H 67H	Model ID (SPD-S)	
12H	Command ID (DT1)	
aaH	Address MSB: upper byte of the starting address of the transmitted data	
bbH	Address 2nd: 2nd byte of the starting address of the transmitted data	
ccH	Address 3rd: 3rd byte of the starting address of the transmitted data	
ddH	Address LSB: lower byte of the starting address of the transmitted data	
eeH	Data: the actual data to be transmitted. Multiple bytes of data are transmitted starting from the address.	
:	:	
ffH	Data	
sum	Checksum	
F7H	EOX (End Of Exclusive)	

- * The amount of data that can be transmitted at once time will depend on the type of data, and data must be requested using a specific starting address and size.
- * If "Data Set 1" is transmitted successively, there must be an interval of at least 40 ms.
- * Regarding the checksum please refer to Page 123.

2. Transmit data

- * In wave mode, the SPD-S sends no messages other than active sensing.
- * Messages included in Phrase Maker data are not transmitted.
- * When SETUP/MIDI/Soft Thru is set to "ON", messages received in addition to the following messages are also sent.

■Channel Voice Messages

- * The following channel voice messages are transmitted on the channel specified in the SETUP/MIDI/MIDI Channel.

●Note Off

Status	2nd byte	3rd byte
8nH	kkH	vvH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)
kk = note number: 00H - 7FH (0 - 127)
vv = Note off velocity: 40H (64) fixed

- * A Note Off message is sent when the time specified in PATCH/PAD CONTROL/Gate Time has lapsed after a pad has been struck.

●Note On

Status	2nd byte	3rd byte
9nH	kkH	vvH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)
kk = note number: 00H - 7FH (0 - 127)
vv = note on velocity: 01H - 7FH (1 - 127)

●Control Change

- * Not transmitted when SETUP/MIDI/CC TX/RX Switch is set to "OFF." (Initial Value is ON)

○Foot Control (Controller number 4)

Status	2nd byte	3rd byte
BnH	04H	vvH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)
vv = Control value: 00H - 7FH (0 - 127) 0-63=OFF, 64-127=ON

- * This message is sent when the foot switch to which WAVE SW is assigned in SETUP/CONTROL SW is depressed. The transmission is not triggered if any other function is assigned to the foot switch.

○Expression (Controller number 11)

Status	2nd byte	3rd byte
BnH	0BH	vvH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)
vv = Control value: 00H - 7FH (0 - 127)

- * The SPD-S transmits a value corresponding to the position of the Expression pedal.

○Effect Control 1 (Controller number 12)

Status	2nd byte	3rd byte
BnH	0CH	vvH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)
vv = Control value: 00H - 7FH (0 - 127)

- * When the EFFECTS CONTROL knob is turned, the corresponding value will be transmitted.

○Effect Control 2 (Controller number 13)

Status	2nd byte	3rd byte
BnH	0DH	vvH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)

vv = Control value: 00H - 7FH (1 - 127)

- * This message is transmitted when a pad for which PATCH/PAD CONTROL/ Effects Switch is set to VELO is struck.

●Program Change

Status	2nd byte
CnH	ppH

n = MIDI channel number: 0H - FH (ch.1 - ch.16)

pp = Program number: 00H - 7FH (prog.1 - prog.128)

- * The program number is transmitted when a patch is selected.
- * Not transmitted when SETUP/MIDI/PC TX/RX Switch is set to "OFF." (Initial Value is ON)

■System Realtime Message

●Active sensing

Status
FEH

- * This will be transmitted constantly at intervals of approximately 250 ms.
- * Not transmitted when SETUP/MIDI/MIDI Ch is set to OFF.

■System Exclusive Messages

- * Regarding the system exclusive message refer to Page 120.

Identity reply and Data Set 1 (DT1) are the only System Exclusive messages transmitted by SPD-S.

When an appropriate Identity Request or Data Request 1 (RQ1) message is received, the requested internal data will be transmitted.

- * Not transmitted when SETUP/MIDI/MIDI Ch is set to OFF.

●Universal Non-realtime System Exclusive Messages

○Identity Reply

Status	Data byte	Status
F0H	7EH, dev, 06H, 02H, 41H, 67H, 01H, 00H, 00H, 00H, 00H, 00H, 00H	F7H

Byte	Explanation
F0H	Exclusive status
7EH	ID number (universal non-realtime message)
dev	Device ID (dev: 00H - 1FH (1 - 32) Initial value is 10H(17))
06H 02H	Identity Reply
41H	ID number(Roland)
67H 01H	Device family code
00H 00H	Device family number code
00H 00H 00H 00H	software revision level
F7H	EOX (End Of Exclusive)

- * When Identity Request (Page 120) is received, Identity Reply message will be transmitted.

●Data Transmission

○Data set 1 DT1 (12H)

Status	Data byte	Status
F0H	41H, dev, 00H, 67H, 12H, aaH, bbH, ccH, ddH, eeH,... ffH, sum	F7H

Byte	Explanation
F0H	Exclusive status
41H	ID number (Roland)
dev	Device ID (dev: 00H - 1FH (1 - 32) Initial value is 10H(17))
00H 67H	Model ID (SPD-S)
12H	Command ID (DT1)
aaH	Address MSB: upper byte of the starting address of the data to be sent
bbH	Address 2nd: 2nd byte of the starting address of the data to be sent
ccH	Address 3rd: 3rd byte of the starting address of the data to be sent.
ddH	Address LSB: lower byte of the starting address of the data to be sent.
eeH	Data: the actual data to be sent. Multiple bytes of data are transmitted in order starting from the address.
:	:
ffH	Data
sum	Checksum
F7H	EOX (End Of Exclusive)

- * The amount of data that can be transmitted at once time will depend on the type of data, and data must be requested using a specific starting address and size.
- * Data larger than 128 bytes must be divided into packets of 128 bytes or less. If "Data Set 1" is transmitted successively, there must be an interval of at least 40 ms between packets.
- * Regarding the checksum please refer to Page 123.

3. Supplementary material

■Decimal and Hexadecimal table

In MIDI documentation, data values and addresses/sizes of exclusive messages etc. are expressed as hexadecimal values for each 7 bits.

The following table shows how these correspond to decimal numbers.

* An “H” is appended to the end of numbers in hexadecimal notation.

D	H	D	H	D	H	D	H
0	00H	32	20H	64	40H	96	60H
1	01H	33	21H	65	41H	97	61H
2	02H	34	22H	66	42H	98	62H
3	03H	35	23H	67	43H	99	63H
4	04H	36	24H	68	44H	100	64H
5	05H	37	25H	69	45H	101	65H
6	06H	38	26H	70	46H	102	66H
7	07H	39	27H	71	47H	103	67H
8	08H	40	28H	72	48H	104	68H
9	09H	41	29H	73	49H	105	69H
10	0AH	42	2AH	74	4AH	106	6AH
11	0BH	43	2BH	75	4BH	107	6BH
12	0CH	44	2CH	76	4CH	108	6CH
13	0DH	45	2DH	77	4DH	109	6DH
14	0EH	46	2EH	78	4EH	110	6EH
15	0FH	47	2FH	79	4FH	111	6FH
16	10H	48	30H	80	50H	112	70H
17	11H	49	31H	81	51H	113	71H
18	12H	50	32H	82	52H	114	72H
19	13H	51	33H	83	53H	115	73H
20	14H	52	34H	84	54H	116	74H
21	15H	53	35H	85	55H	117	75H
22	16H	54	36H	86	56H	118	76H
23	17H	55	37H	87	57H	119	77H
24	18H	56	38H	88	58H	120	78H
25	19H	57	39H	89	59H	121	79H
26	1AH	58	3AH	90	5AH	122	7AH
27	1BH	59	3BH	91	5BH	123	7BH
28	1CH	60	3CH	92	5CH	124	7CH
29	1DH	61	3DH	93	5DH	125	7DH
30	1EH	62	3EH	94	5EH	126	7EH
31	1FH	63	3FH	95	5FH	127	7FH

D: decimal

H: hexadecimal

* Decimal values such as MIDI channel, bank select, and program change are listed as one(1) greater than the values given in the above table.

* A 7-bit byte can express data in the range of 128 steps. For data where greater precision is required, we must use two or more bytes. For example, two hexadecimal numbers aa bbH expressing two 7-bit bytes would indicate a value of $aa \times 128 + bb$.

<Example1> What is the decimal expression of 5AH?

From the preceding table, 5AH = 90

<Example2> What is the decimal expression of the value 12 34H given as hexadecimal for each 7 bits?

From the preceding table, since 12H = 18 and 34H = 52

$18 \times 128 + 52 = 2356$

■Calculation of the Checksum of Exclusive Messages

Roland Exclusive messages (RQ1, DT1) are transmitted with a checksum at the end (before F7) to make sure that the message was correctly received.

The value of the checksum is determined by the address and data (or size) of the transmitted exclusive message.

○How to calculate the checksum (hexadecimal numbers are indicated by “H”)

The checksum is a value derived by adding the address, size and checksum itself and inverting the lower 7 bits.

Here's an example of how the checksum is calculated.

We will assume that in the exclusive message we are transmitting, the address is aa bb cc ddH and the data or size is ee ff gg hhH.

$aa + bb + cc + dd + ee + ff + gg + hh = \text{sum}$

$\text{sum} / 128 = \text{quotient} \dots \text{remainder}$

$128 - \text{remainder} = \text{checksum}$

(However, the checksum will be 0 if the remainder is 0.)

SAMPLING PAD

Date : Feb. 14, 2003

Model SPD-S

MIDI Implementation Chart

Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default Changed	1-16, OFF 1-16, OFF	1-16, OFF 1-16, OFF	Memorized (Non-Volatile)
Mode	Default Messages Altered	Mode 3 x *****	Mode 3 x *****	
Note Number	: True Voice	0-127 ***** ^{*1}	0-127 0-127 ^{*1}	
Velocity	Note On Note Off	o 9nH, v=1-127 o 8nH, v=64	o x	
After Touch	Key's Channel's	x x	x x	
Pitch Bend		x	x	
Control Change	4 11 12 13	o o o 1-127	o o o o	Foot Control Expression Effect Control 1 Effect Control 2
Program Change	: True Number	o 0-127	o 0-127	Program Number: 1-128
System Exclusive		o	o	
System Common	: Song Position : Song Select : Tune Request	x x x	x x x	
System Real Time	: Clock : Commands	x x	x x	
Aux Messages	: All Sound Off : Reset All Controllers : Local On/Off : All Notes Off : Active Sensing : System Reset	x x x x o x	o o x o o x	
Notes	^{*1} Can be set and stored for each pad. - In wave mode, the SPD-S receives or sends no messages other than active sensing.			

Mode 1: OMNI ON, POLY
 Mode 3: OMNI OFF, POLY

Mode 2: OMNI ON, MONO
 Mode 4: OMNI OFF, MONO

o: Yes
 x: No

Troubleshooting

This section outlines points to check if you experience problems, and what to do about them.

Problems When Playing the Internal Sound Generator

No Sound/Volume too Low

Are the SPD-S and external devices connected correctly?

Check the connections. (p. 20)

An audio cable may be broken.

You may be using an audio cable with a built-in resistor.

Use a connection cable that does not contain a resistor (e.g., Roland PCS series).

The volume of a connected amp or mixer may be turned down.

Adjust the volume to an appropriate level.

The volume of SPD-S may be turned down.

Adjust the volume to an appropriate level.

Can you hear sound through the headphones?

If there is sound through the headphones, the problem may be that a connecting cable is damaged, or there is a problem with the amp or mixer. Check the amplification system and the audio connections. (p. 20)

Is the pad indicator or [START/STOP] lit when you want to play back a wave?

When you hit a pad in patch mode, the pad indicator lights and the wave is played back. If it is not lit after a strike, "I000 OFF" or an empty wave is assigned to the pad. Assign a non-empty wave to the pad or execute sampling/resampling.

When you hit a pad in wave mode, [START/STOP] lights and the wave is played back. If it is not lit after a strike, "I000 OFF" or an empty wave is selected. Select a non-empty wave or execute sampling/resampling.

Is Sensitivity set to a low value?

Raise the Sensitivity value. (p. 77, p. 81, p. 83)

Is Local Control set to OFF?

If so, pads are separated from the sound generator and as a result no sound is produced when they're struck. Set the Local Control to ON. (p. 84)

Certain Pads Don't Sound

Is the level of WAVE A/B low?

Adjust the level of WAVE A/B. (p. 34)

Is the effects level low?

The level can be controlled with the EFFECTS CONTROL knob for some effect types. For effect types and controllability using the EFFECTS CONTROL knob, see "Effect list." (p. 92)

Is Ctrl SW set to REC-REH, TAP TEMPO or SOUND OFF?

If so, the sound assigned to the pad cannot be triggered. Set the control switch to OFF. (p. 79)

Sound Production Is Disrupted

Is Mute Group set to anything other than OFF?

Set Mute Group to OFF. (p. 36)

Is Trigger in Wave Edit set to ALTERNATE?

If so, the wave is alternately muted and reproduced each time you hit a pad. Set Trigger to SHOT to reproduce the wave each time you hit the pad. (p. 46)

Is the Mask Time value appropriate?

Sometimes you can inadvertently produce a second hit on a pad even though you think you've hit it just once; the stick's momentum can cause it to touch the pad right after the first hit. In such situations, if the trigger mode for the wave is set to ALT, sound production is stopped if there is a second strike. Raise the Mask Time value. (p. 77, p. 82)

Sound Production Is not Stopped

Press [ALL SOUND OFF] to stop all sounds being produced. (p. 31)

Is Trigger in Wave Edit set to SHOT?

If so, sound production lasts until the end point of the wave, so you may feel that the sound is continuing endlessly when a long wave is played back. If Trigger is set to ALT, the wave is alternately reproduced or muted each time you hit the playing surface. (p. 46)

Is Loop in Wave Edit set to ON?

Set Loop to OFF. (p. 46)

The Volume Is Unchangeable

Is Dynamics set to OFF?

Set Dynamics to ON. (p. 36)

The Volume Cannot Be Properly Controlled with Strike Strength

Are Sensitivity and VeloCurve set appropriately?

Adjust Sensitivity and VeloCurve. (p. 77, p. 81, p. 83)

An Externally Input Sound Is not Produced, or Is Produced at a Low Volume

Is Input Mix set to OFF?

To produce an externally input sound in any event other than sampling, set Input Mix to ON. During sampling, an externally input sound is produced irrespective of the Input Mix value. (p. 76)

Is the input level low?

Turn the INPUT LEVEL knob to an appropriate level. (p. 26, p. 54, p. 56)

Is the volume of the device connected to LINE IN jacks low?

Adjust the volume to an appropriate level.

You may be using an audio cable with a built-in resistor.

Use a connection cable that does not contain a resistor (e.g., Roland PCS series).

Mic Sound Is not Output/Is too Weak

The input source may be set to LINE.

Set the MIC/LINE switch on the rear panel to "MIC".

The mic level may have been lowered.

Use the INPUT LEVEL knob on the rear panel to adjust the level appropriately. (p. 26, p. 54, p. 56)

Can't Record a Wave

If you are attempting to sample to a memory card, has the memory card been formatted by the SPD-S?

Format the memory card with the SPD-S. (p. 67)

A Sampled Sound Contains Much Noise or Distortion

Is the input level appropriate?

If the input level is too high, the sampled sound may be distorted. If it is too low, the sampled sound may contain overt noise. Adjust the INPUT LEVEL knob while watching the level meter displayed on the screen to maximize the input level within the range in which the excess level indication remains unlit. (p. 26, p. 54, p. 56)

Are the effect settings appropriate?

Some types of effect may increase the level louder than the original sample, or may intentionally distort the sound. Some effects will also cause noise to be emphasized. Temporarily turn off effects, and check whether the wave itself contains noise or distortion. Then adjust the effect settings appropriately. For the relation between effect types and control knobs, refer to "Effects List." (p. 92)

Problems with Internal Memory

Data Was not Saved Correctly in Internal Memory

It is possible that the power was turned off while data was being written into internal memory.

The lost data cannot be recovered. In this case, it is possible that all of the internal memory data may be damaged. If you continue using the SPD-S in this state, further malfunctions may occur. Please initialize the internal memory. When you initialize, all data in internal memory will be lost.

Problems with a Memory Card

Data Was not Saved Correctly in a Memory Card

It is possible that the power was turned off while data was being written into the memory card.

The lost data cannot be recovered. In this case, it is possible that the data of the entire memory card has been damaged. If you continue using the SPD-S in this state, further malfunctions may occur. Please format the memory card. When you format, all data in the memory card will be lost.

An Inserted Memory Card Is not Detected

Can't Select Data from a Memory Card

Is the memory card inserted correctly?

After the shutdown operation, remove the memory card, then re-insert the memory card correctly. (p. 23)

Is the memory card an appropriate type?

The SPD-S can use 16 MB–512 MB (3.3V) CompactFlash memory cards. Other types cannot be used.

Is the memory card formatted correctly?

Only memory cards that have been formatted by the SPD-S can be used. Please format the memory card. (p. 67)

Problems When Using an External Pad

No Sound

Is InputMode set appropriately?

If using two pads, set it to TRGx2.

If using a pad with the rim-shot feature, set it to HD&RM.

To use the rim-shot/edge-shot/bell-shot features, connect a pad using a stereo cable that comes with the pad product. In this case, you can connect one pad only. (p. 80)

The Volume Cannot Be Properly Controlled Through Strike Intensity

Is Trig Type set appropriately?

Specify the trigger type according to the pad in use. Adjust Sensitivity and VeloCurve. (p. 77, p. 81, p. 83)

A Sound Is not Produced with a Weak Strike

Is the Threshold value too large?

Set Threshold to an appropriate value. (p. 81)

When Striking Repeatedly, some Sounds Are Lost

Is Trig Type set appropriately?

Make the trigger type match. In some cases, when using pads or acoustic drum triggers from other manufacturers, you should make your settings in Scan Time or other parameters. (p. 80)

Problems When Using a Foot Switch

A Sound Is Produced When the Foot Switch Is Released

Is FootSWPolarity set appropriately?

Set the polarity according to the foot switch in use. When using a DP-2, set it to “+.” (p. 76)

Problems When Playing Back a Sample from an External MIDI Device

No Sound

Are the MIDI cables connected correctly?

Check the connections.

A MIDI cable may be broken.

Is the MIDI channel set correctly?

Set the MIDI channels of the SPD-S and external MIDI device to the same setting. (p. 84)

Has the note number been set properly?

When a note number that is not assigned to any pad is received, the SPD-S produces no sound. Change the note number value or switch over to a patch to which another note number is assigned. (p. 36)

Is the same note number assigned to more than one pad?

If so, the SPD-S produces only the sound assigned to one pad. Assign a unique note number to each of the pads. (p. 36)

Is the program number set appropriately?

Match the program number on the SPD-S with that on the external MIDI device.

Sound Production Is not Stopped

Press [ALL SOUND OFF] to stop all sounds being produced. (p. 31)

Is Trigger in Wave Edit set to SHOT or ALTERNATE?

If so, the SPD-S does not receive any Note Off messages.

Set Trigger to GATE so that the SPD-S receives Note Off messages to mute the sound. (p. 46)

Effects Are Uncontrollable, or It Is Impossible to Switch between Wave A and Wave B

Is CC TX/RX set to OFF?

Set CC TX/RX to ON. (p. 84)

Is “I000 OFF” or any empty wave assigned to Wave B?

Select a non-empty wave for Wave B (p. 35), or execute sampling/resampling.

Problems When Playing an External MIDI Sound Module

No Sound

Are the MIDI cables connected correctly?

Check the connections.

A MIDI cable may be broken.

Is the volume of the MIDI sound module turned down?

Raise the volume.

Is the MIDI channel set correctly?

Set the MIDI channels of the SPD-S and external MIDI device to the same setting. (p. 84)

Have the note numbers been set properly?

Match the note numbers on the SPD-S with those on the MIDI sound module. (p. 36)

Is Ctrl SW set to REC-REH, TAP TEMPO or SOUND OFF?

If so, the pad won't transmit note information. Set Ctrl SW to OFF. (p. 79)

The Sound Is too Soft

Is Gate Time set too low?

If you are playing a sound with a soft attack, set a longer Gate Time. (p. 36)

The Sound of the MIDI Sound Module Changes/Doesn't Change When You Change Patches

Is PC TX/RX set appropriately?

To be able to change the sounds of the MIDI sound module, set PC TX/RX to ON. When you do not want to change the sounds of the MIDI sound module, set it to OFF. (p. 84)

The MIDI Sound Module Cannot Be Controlled with the EFFECTS CONTROL Knob or the Expression Pedal

Is CC TX/RX set to OFF?

Set CC TX/RX set to ON. (p. 84)

Other Problems

The SPD-S Receives No Exclusive Messages

Is MIDI CH set to OFF?

If so, the SPD-S cannot receive MIDI messages. Set MIDI CH to any value other than OFF. (p. 84)

Does the Device ID number match?

The Device ID number of the SPD-S match the Device ID number of the transmitting MIDI sound module. (p. 84)

Effects Do not Function

Is [EFFECTS] switched off?

Switch [EFFECTS] on. (p. 31)

The Screen Display Is So Faint or Dark That It Is Hard to Read.

Has the display's contrast been properly adjusted?

Adjust the value on the screen for the LCD Contrast parameter (p. 76) or by pressing [PATCH] and [-]/[+] in patch mode (p. 90). Viewing angle and the room temperature affect the visibility of the screen. Reposition the SPD-S as needed to make the screen display easy to read.

Message List

General

Message	Descriptions	Measures
system error!	An error has occurred in the internal system.	Contact your retailer or the nearest Roland Service Center.
memory damaged!	The contents of the internal memory are damaged.	Press any button on the panel to display “[ENTER] to init.” Press [ENTER] to initialize the internal memory. If the problem cannot be solved, contact your retailer or the nearest Roland Service Center.
wave protected!	Wave protection is enabled and the requested operation cannot be executed.	Disable the wave protection. (p. 88)
no empty wave!	No wave is empty and the requested operation cannot be executed.	Delete unneeded waves.
memory full!	The memory has insufficient free space for sampling or resampling. And the requested operation cannot be executed.	Delete unneeded waves.
	In Phrase Maker, the limit on the number of sounds that can be stored has been exceeded.	—
data overload!	Proper playback could not be achieved because an excessive amount of data was recorded using Phrase Maker.	—
no pieces!	None of the chopped pieces is selected and the requested operation cannot be executed.	—
over 4 voices!	The wave you are trying to resample has more than four voices.	—
cannot execute!	In Wave Delete, etc. an empty wave is selected and the requested operation cannot be executed.	Select a wave that has data.
	In Wave Copy, a data-containing wave is selected as the destination and the requested operation cannot be executed.	Select an empty wave.
	A patch to which no wave has been assigned is selected for resampling in the patch mode, and resampling cannot be executed.	Select a patch to which a wave has been assigned.
busy!	The sound generation speed is not sufficient.	Reduce the number of voices.
lock!	Buttons are locked, so button operations won’t be accepted.	Unlock the buttons. (p. 31)

Memory card (CompactFlash)

Message	Descriptions	Measures
card damaged!	The data stored on the card has been corrupted.	Format the card. (p. 67)
unformatted!	A card the format of which is not supported by SPD-S has been inserted.	Format the card. (p. 67)
	The data stored on the card has been corrupted.	Format the card. (p. 67)
unsupported!	A card the size of which is not supported by SPD-S has been inserted.	Cards supported by SPD-S are 3.3 V CompactFlash cards with the capacity of 16 to 512 MB. Check the card.
	You are trying to import an audio file that cannot be imported to SPD-S.	Refer to the notes on importing audio files. (p. 69)
no card!	No card is in the slot and the requested operation cannot be executed.	Insert a card.
no empty backup!	The card has no empty backup data set and the requested operation cannot be executed.	Delete unwanted backup data.
same file exist!	There is an audio file with an identical file name.	Rename a file on the card using a computer or delete the file.
cannot execute!	In File Import, the card has no audio file and the requested operation cannot be executed.	Refer to the notes on importing audio files. (p. 69)
	In Backup Load/Delete, an empty backup data set is selected and the requested operation cannot be executed.	Select a non-empty backup data set.
	In Backup Save, a non-empty backup data set is selected as destination and the requested operation cannot be executed.	Select an empty backup data set.
card ejected!	The card has been ejected without shutdown operation. Data stored in internal memory or on the memory card may have been lost.	—

MIDI

Message	Descriptions	Measures
checksum error!	The checksum value in the System Exclusive message is incorrect.	—
MIDI buff full!	The volume of MIDI messages received is too large and cannot be processed.	Reduce the volume of MIDI messages sent to the SPD-S.
MIDI Rx error!	The SPD-S failed to receive a MIDI message correctly.	Check that no illegal MIDI message has been sent.
MIDI offline!	MIDI cable connection is faulty.	Check that the MIDI cables are connected correctly, and they are not broken.

Other

Message	Descriptions
Rec (while sampling) Resample Rec now writing.. now processing.. shutdown..	If the SPD-S is powered off while any of these indications are displayed, the data in memory may be destroyed.

Specifications

SPD-S: Sampling Pad

Pads

Built-in Pads: 9

Maximum Polyphony

8 voices

Sampling Mode

Fine/Standard/Long

Sampling Frequency

44.1 kHz

Input Level

Line: -10 dBu

Mic: -50 dBu

Input Impedance

10 k Ω (LINE/MIC)

Output Level

Output: -10 dBu

Output Impedance

Output: 1 k Ω

Headphones: 47 Ω

* $0\text{ dBu} = 0.775\text{ Vrms}$

Memory

Patches: 128

Waves:

Internal: 399 (Pre-loaded Sound 181)

Card: 500

Maximum Sampling Time

12 min. approx. (Internal Memory, Long Mode)

Effects

Multi-Effects (30 types) + Ambience (System)

Display

16 characters, 1 line (backlit LCD)

Connectors

Output Jacks (L/Mono, R) (1/4 inch phone type)

Input Jacks (L/Mono, R) (1/4 inch phone type)

**LINE/MIC selectable*

Headphones Jack (Stereo) (Stereo 1/4 inch phone type)

Trigger Input Jack (1/4 inch TRS phone type)

Expression Pedal (1/4 inch TRS phone type)

MIDI Connectors (IN, OUT)

Foot Switch Jack (1/4 inch TRS phone type)

CompactFlash Card Slot

Power Supply

DC 9 V: AC Adaptor

Current Draw

1,000 mA

Dimensions

342 (W) x 282 (D) x 83 (H) mm

13-1/2 (W) x 11-1/8 (D) x 3-5/16 (H) inches

Weight

2.1 kg

4 lbs 11 oz (excluding AC adaptor)

Accessories

Owner's Manual

AC Adaptor (ACI-120C/ACI-230C/ACB-230E/ACB-240A)

Sampling CD

Slit Tape

Security Screw x 2

Hexagon Wrench

Options

Pads (PD-120, PD-100, PD-80, PD-80R, PD-9, PD-7, PD-6, KD-7)

Expression Pedal (EV-5)

Foot Switch (BOSS FS-5U)

Hi-Hat Control Pedal (FD-7)

PCS Connecting Cord Set (PCS-31)

All Purpose Clamp Set (APC-33)

* *In the interest of product improvement, the specifications and/or appearance of this unit are subject to change without prior notice.*

Patch List



Each patch in the following table will be over-written when you save the edited one. If you need to restore the all patches to factory settings, refer to “Restoring the Factory Settings Using the Accompanying CD” (p. 117).

No.	Name	No.	Name	No.	Name	No.	Name	No.	Name
1	Join Us!	25	CoolWind	48	NewPatch	82	Join Us!	106	CoolWind
2	Filter-9	26	EchoohcE	:	:	83	Filter-9	107	EchoohcE
3	HipHoppr	27	Voices	:	:	84	HipHoppr	108	Voices
4	LAttin!!	28	TR808Dr2			85	LAttin!!	109	TR808Dr2
5	DrumNfil	29	SnglHead			86	DrumNfil	110	SnglHead
6	Efct-Me!	30	Perffect			87	Efct-Me!	111	Perffect
7	CajonBt	31	Timbales			88	CajonBt	112	Timbales
8	Eco-Echo	32	Conga			89	Eco-Echo	113	Conga
9	VeloCity	33	RhytmBox			90	VeloCity	114	RhytmBox
10	Industry	34	Chimes			91	Industry	115	Chimes
11	AcousDrs	35	Cym&Gong			92	AcousDrs	116	Cym&Gong
12	Bongo	36	Add On			93	Bongo	117	Add On
13	TR808Dr1	37	Percuss1			94	TR808Dr1	118	Percuss1
14	909Mania	38	Percuss2			95	909Mania	119	Percuss2
15	Outback	39	Percuss3			96	Outback	120	Percuss3
16	SappBeat	40	Percuss4			97	SappBeat	121	Percuss4
17	Winter	41	SynSweep			98	Winter	122	SynSweep
18	All Perc	42	Phaser			99	All Perc	123	Phaser
19	RudeDrs	43	Radio			100	RudeDrs	124	Radio
20	TablaJam	44	Slicer			101	TablaJam	125	Slicer
21	Drums-Q	45	ShrtLupr			102	Drums-Q	126	ShrtLupr
22	Mr.LO-FI	46	RingMod	:	:	103	Mr.LO-FI	127	RingMod
23	Pulsar	47	OvrDrive	:	:	104	Pulsar	128	OvrDrive
24	Spiral			81	NewPatch	105	Spiral		

Wave List



Each wave in the following tables will be over-written when you save the edited one. If you need to restore the all waves to factory settings, refer to “Restoring the Factory Settings Using the Accompanying CD” (p. 117).

<Off>		<Phrase>		<S.E.>		<Percussion>			
No.	Name	No.	Name	No.	Name	No.	Name	No.	Name
I000	OFF	I001	Moon Drs	I032	AirDrft1	I053	WndChimD	I085	CowbJam2
		I002	Moon Bas	I033	AirDrft2	I054	WndChimU	I086	CowbBngo
		I003	Moon Gt1	I034	SuperLow	I055	PinChime	I087	CowbMmbo
		I004	Moon Gt2	I035	RevoDown	I056	BelTreeD	I088	Agogo Hi
		I005	Moon Vo	I036	SweptNoiz	I057	BelTreeU	I089	Agogo Lo
		I006	JzStpDrs	I037	VerbyHit	I058	CrotaleH	I090	SlighBel
		I007	JzStpBas	I038	RevLASER	I059	CrotaleL	I091	AnklBedD
		I008	JzStpChd	I039	WhtPulse	I060	TriangOp	I092	AnklBedS
		I009	JzStpPad	I040	Sperks	I061	TriangMt	I093	Shaker
		I010	JzStpMel	I041	SldWhstl	I062	AccCym 4	I094	ShakeEgg
		I011	2step Bt	I042	NoiseTap	I063	AccCym 6	I095	Maracas
		I012	JnglBt 1	I043	Dolphin	I064	CupChim6	I096	CabasaSp
		I013	JnglBt 2	I044	Scratch	I065	CupChim8	I097	CabasaSt
		I014	Xylo Bkg	I045	Hi-Q	I066	Gong	I098	Bongo Hi
		I015	SynthBkg	I046	Spd-S	I067	Tamtam	I099	Bongo Sp
		I016	Org Bkg	I047	Welcome	I068	BlockJam	I100	Bongo Lo
		I017	HipHpBkg	I048	ComeOn!	I069	Block Hi	I101	Conga Hi
		I018	Didgerdo	I049	UGotGrv	I070	Block Lo	I102	Conga Sp
		I019	BongoPtn	I050	Yeaah	I071	Claves 1	I103	Conga Lo
		I020	CongaPtn	I051	Haaaay	I072	Claves 2	I104	Cajon Sp
		I021	ShakrPtn	I052	BasSlide	I073	Cricket	I105	Cajon Bs
		I022	TablaPtn			I074	FlexMtl	I106	TimbleHi
		I023	16BtPtn1			I075	MtlCrash	I107	TimbleRm
		I024	16BtPtn2			I076	Ratchet	I108	TimbleLo
		I025	16BtPtn3			I077	Vibraslp	I109	SpokTom1
		I026	16BtFil1			I078	Tmbrn 1	I110	SpokTom2
		I027	16BtFil2			I079	Tmbrn 2	I111	SpokTom3
		I028	16BtFil3			I080	TmbrnStk	I112	SpokTom4
		I029	16BtEnd			I081	Tmbrn Sk	I113	OctTom 1
		I030	16BtSnr			I082	CowbellS	I114	OctTom 2
		I031	16BtCrK			I083	CowbellL	I115	OctTom 3
						I084	CowbJam1	I116	OctTom 4

<Drums>									
No.	Name	No.	Name	No.	Name	No.	Name	No.	Name
I117	clubSnr1	I133	Xstick 1	I149	909Kik	I165	AcuHH ft	I181	AcuTom16
I118	clubSnr2	I134	Xstick 2	I150	110Kik	I166	110 Cym	I182	empty
I119	clubSnr3	I135	Xstick 3	I151	AcuKik 1	I167	Splash 6	:	:
I120	clubSnr4	I136	808Claps	I152	AcuKik 2	I168	Splash 8	:	:
I121	clubSnr5	I137	909Claps	I153	clubHH1c	I169	Splash10	I399	empty
I122	clubSnr6	I138	110Claps	I154	clubHH1o	I170	Crash 13		
I123	clubSnr7	I139	HndClap1	I155	clubHH2c	I171	Crash 16		
I124	clubSnr8	I140	HndClap2	I156	clubHH2o	I172	Crash 18		
I125	clubSnr9	I141	FingSnap	I157	808HH cl	I173	China 16		
I126	808Snr	I142	clubKik1	I158	808HH op	I174	Ride 20		
I127	909Snr	I143	clubKik2	I159	909HH cl	I175	Ride Bl		
I128	110Snr	I144	clubKik3	I160	909HH op	I176	808Tom 1		
I129	eSnr	I145	clubKik4	I161	110HH cl	I177	808Tom 2		
I130	AcuSnr 1	I146	clubKik5	I162	110HH op	I178	808Tom 3		
I131	AcuSnr 2	I147	808Kik 1	I163	AcuHH cl	I179	AcuTom10		
I132	AcuSnr 3	I148	808Kik 2	I164	AcuHH op	I180	AcuTom12		

Audio Track List

The accompanying CD contains many music pieces, drum sounds, percussion sounds and sound effects for sampling with the SPD-S.

Connect your CD player to the SPD-S (p. 25) and follow the steps explained in "Sampling" (p. 26, p. 52) to sample a sound.



Noise or distortion is deliberately present in some musical pieces or sounds on the CD.

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The accompanying CD also contains data for restoring the SPD-S to the factory settings. For details, see "Restoring the Factory Settings Using the Accompanying CD" (p. 117).

Audio Track List

Track list

Track	Title	Track	Title
1	Session 1 multi-track phrases (BPM=120)	45	acoustic kicks
2	Session 2 multi-track phrases (BPM=100)	46	club hi-hats
3	Session 3 multi-track phrases (BPM=108)	47	electronic hi-hats
4	Session 4 multi-track phrases (BPM=134)	48	acoustic hi-hats
5	Session 5 multi-track phrases (BPM=120)	49	spoke toms, oct toms
6	Session 6 multi-track phrases (BPM=100)	50	electronic toms
7	Percussion multi-track phrases (BPM=130)	51	acoustic toms
8	World percussion ensemble 1	52	electronic cymbals
9	World percussion ensemble 2	53	crash cymbals, china cymbals, ride cymbals
10	World percussion ensemble 3	54	effect cymbals
11	World percussion ensemble 4	55	gong, tamtam
12	World percussion ensemble 5	56	wind chime, pinchime, belltree
13	World percussion ensemble 6	57	triangle, crotale
14	World percussion ensemble 7	58	tambourine
15	16beat drum patterns & fills (BPM=108)	59	cowbell, agogo bells
16	fast speed drum phrases	60	sleigh bells, african jingle
17	hip-hop drum phrases	61	ankle beads
18	tabla phrases	62	shaker, ganza
19	didgeridoo phrases	63	maracas, caxixi, shekere
20	riff & sequence	64	claves, wood block
21	walking bass phrases (BPM=120)	65	cricket, flex metal, metal crasher
22	DREAM TRANCE multi-track phrases (BPM=136)	66	ratchet, vibla-slap
23	GARAGE HOUSE multi-track phrases (BPM=127)	67	bongo
24	G-FUNK multi-track phrases (BPM=94)	68	conga
25	G-FUNK2 multi-track phrases (BPM=94)	69	timbales
26	ABSTRACT multi-track phrases (BPM=88)	70	djembe
27	R&B multi-track phrases (BPM=80)	71	cajon
28	R&B2 multi-track phrases (BPM=78)	72	talking drum, afro drums
29	ART CORE multi-track phrases (BPM=165)	73	cuica
30	JAZZ STEP multi-track phrases (BPM=172)	74	pandeiro
31	DRUM'N'BASS multi-track phrases (BPM=176)	75	surdo
32	DARK CORE multi-track phrases (BPM=160)	76	tamborim
33	hits	77	berimbau
34	special FX	78	caixa
35	voices 1	79	apito, rainstick
36	voices 2	80	tabla
37	voices 3	81	dholak
38	bass slide	82	pot drum
39	club snares	83	timpani
40	electronic snares	84	animal S.E.
41	acoustic snares	85	nature S.E.
42	hand claps, finger snap	86	transport S.E.
43	club kicks	87	human life S.E.
44	electronic kicks		

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For the U.K.

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

Under no circumstances must either of the above wires be connected to the earth terminal of a three pin plug.



For EU Countries

This product complies with the requirements of European Directive 89/336/EEC.

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

NOTICE

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

AVIS

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

